THE UNIVERSITY
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Hurling Together with Technology

Appropriation of the mobile phone in the everyday life of an Irish community group

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This thesis is my own work and has not been submitted for any other degree or professional qualification.

Pat Byrne ……

TEXT

I tend the mobile now
like an injured bird.

We text, text, text
our significant words.

I re-read your first,
your second, your third,

Look for your small *xx*,
feeling absurd.

The codes we send
arrive with broken chord.

I try to picture your hands,
their image is blurred.

Nothing my thumbs press
will ever be heard.

Carol Ann Duffy

ABSTRACT

This thesis examines how a new media technology becomes entrenched into the fabric of society – in particular how the mobile phone was incorporated into the existing communications landscape of a local voluntary community group: an Irish sports club. In the past, face-to-face interaction formed the basis of all social relations and strong local collectives were seen to provide a positive and supportive social environment, generating strong social capital. Today's mediated communication enables the 'networked individual' who can choose when, where and with whom they share their lives. This has implications for the persistence and strength of local associations. Writers like Putnam (2000) have expressed concerns about the attenuation of local communities. However, others propose that communications technologies can provide new additional ways for individuals to link with each other in a 'glocalised' society (Hampton and Wellman, 2003) and this has the potential to overcome some of the limitations of the communicators not being in the same physical space. This thesis critically examines the applicability of these partly competing theses in the period in which mobile telephony became widely embedded in Irish society.

Through 21 detailed interviews and a survey of 57 players, administrators and supporters, the study examines the choices made by club members in adopting and using the mobile phone. It further explores the changes they have made in their communication patterns and considers the implications of these for the cohesion and persistence of the community group as an entity and also the social capital it engenders. The study draws upon existing theories of human-technology interaction, in particular the Social Shaping of Technology perspective (Williams and Edge, 1996), to examine how club members weave their phone use into their everyday practices. Silverstone and Haddon's (1996) Domestication approach, with its steps of appropriation, objectification and incorporation provide the detailed framework in mapping out this process.

The study findings reveal that community members have all adopted the mobile phone and are heavy users of both text and voice calls. Membership of the sports club has eased the adoption process by providing examples of the artefact in use and a supporting environment when problems arise. Although use is now universal and intensive, there was a differential appropriation of the phone, with male club members being the first purchasers and females often being brought into the circle of users through a gifted or handed-down model. Users have devised strategies to manage their multiple overlapping sets of social relationship. They report that their use of technology has enabled a widening of their social circle while also bringing it closer, literally at the touch of a button. Contrary to the expectations of those analysts and policymakers who have foreseen technology causing local engagement to diminish, the clubs in my study have endured and are thriving; the social capital of their members is still strong and growing. This informs a critical reappraisal of such theories of community attenuation and the policies they have engendered.

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Chapter 1 Introduction

This thesis examines the use of the mobile phone within a local community group – an Irish sports club. It focuses on the ways in which members handle the phone as a personal artefact, and how they use it to manage their personal relationships, in particular those with other group members. It then reflects on how this form of mediated communication is being blended with the face-to-face interactions which are core to the group's very existence. The findings are then analysed within two theoretical contexts – that of our ongoing relationship with communications technologies, and the role of community life today.

The research is motivated by my long-term engagement with computer and communications technology and my interest in seeing how it has transformed in recent years from being a rarefied and somewhat elitist experience to an everyday activity practiced by all sections of society. In particular, the rapid growth and ubiquitous acceptance of the mobile phone, and its comfortable use by all sectors of the population, has set it apart as a particularly egalitarian and democratised piece of technology. The speed and universality of adoption of this single piece of equipment has implications for society as a whole in terms of how we deal with new technologies; since it is a personal communications device it also has implications on the form and shape of how we manage our individual relationships

through it. In recent years I have also been involved with community groups, working with them to use technology in strategic ways to further their own ends. This has exposed me to the positive and useful work being done by ordinary citizens in often quiet ways, and I have experienced at first hand the flow of social capital in such voluntary organisations. In essence, social capital is the value gained through being part of a well-connected network who regularly support each other, and there has been much talk of it being negatively affected by our extensive use of technology. This has not been my experience. The linking of these two interests form the impetus behind this piece of research.

To best examine these topics, this research focuses on the old (a face-to-face community group), and looks to how they incorporate the new (specifically, the mobile phone) into their everyday practices. The mobile phone as a technical artefact, while relatively recent, is widely accepted and in widespread use in local community organisations. As a communications medium, it can provide interconnectivity in new ways (location-independent voice and text messages) and help facilitate the connections which are a key underlying ingredient of civic engagement. The addition of a medium for mediated communication to a set of people whose communication is essentially face-to-face enables questions over the efficacy of different forms of interaction in their communication patterns and ultimately their functioning and continuing existence as a community group.

The period in which this research was initiated is particularly opportune in that it was a transition period towards full acceptance of the mobile phone as a piece of everyday technology. The first tranche of fieldwork was done in the West of Ireland in 2006, a time when there was full penetration of mobile phones within the population and yet it was still considered a novelty by most users. Owners had a fascination with their phones and were in a position to acknowledge how they were fitting it into their everyday lives. They were also still grappling with the social norms around its use. A few years later, with the regular mobile phone becoming

more normalised and the smart phone being the new technology of choice, it is possible to look back on the negotiations which took place and any shifts in practice which may have ensued. This thesis is situated in the timeframe of that window where we can both look forward and look back and where we may be in a position to reflect and make some conclusions about these changes.

1.1 The social shaping of the mobile phone

Communications technologies are more than just tools for living, useful or attractive artefacts which ease our daily lives. Their ownership and use also equips us with the power to 'manage' our relationships with others, based on the efforts we put into maintaining our social links, and our attention in responding to contacts made. Decisions over with whom we get in touch, and with what regularity, dictate the strength of the bonds between us. The mobile phone has not only made this relationship management easier, it has also provided us with new ways to carry it out. In particular, the addition of short message service (SMS) messages to our repertoire of communication methods enables us to make an instant tie with an absent other, whom we know will receive the message without us verbally communicating it, irrespective of their location or their current preoccupation. Messages without talk have a different tenor to voice calls. SMS are often short and to the point (arrangement-making), or more meaningless interactions for pleasure (jokes and love messages) and are often links which would not have been possible with land-line phones. They provide us with new ways to establish and maintain relationships.

The fact that this phone is portable enables contact irrespective of the location of either party, immediately. This has changed the frequency and patterns of how we communicate, in particular giving ease to the regularity with which we touch base with others, irrespective of their location. It also permits us to enjoy a flexibility in our lifestyle, easing the organisation of face-to-face meetings and integrating social interaction into busy and distance-dispersed daily lives.

This thesis takes a social shaping of technology approach (MacKenzie and Wajcman, 1999) in that it looks at the mutual interactions of technology and society. In this instance social shaping is expressed through how the mobile phone might enable new forms of communications while complementing old ones, and how the communication links of a face-to-face community group might offer new

opportunities for mobile phone applications. Social shaping engages with the active role of the technology user as an agent of change and examines outcomes of technology introduction from within the cycle of use. It also considers who that user might be and how technologies may have uneven adoption through the population. I am adopting this approach as an alternative to widespread technologically determinist accounts which see outcomes rooted in the artefact yielding social transformation.

I use the framework of Domestication (Silverstone and Haddon, 1996) to examine the story of the adoption and integration of the mobile phone as a communications artefact in everyday use. The domestication approach covers the cycle of use from initial imagining of ownership through to having it as a normalised part of the everyday. It therefore provides a useful lens through which to examine a personal communications device, in particular where take-up may have provided different outcomes than those predicted. For the mobile phone which is now in use among all sections of the population the technology is no longer seen as being something to be grappled with. However, decisions must still be made around its everyday use in that it affects such factors as our budget, our relationships with others and the personal daily interactions with which we manage our busy lives. The domestication approach is firmly rooted in the everyday practices of individuals, and as such provides a suitable framework to examine this ongoing cycle of use.

1.2 Technology and community

Recent developments in Information and Communication Technologies (ICTs) have enabled us to achieve more in the workplace, and to achieve it faster. They have also helped us to produce a more mobile and more globalised society, in which individuals have more opportunities to travel and to engage in activities which were often unavailable to previous generations. Together with decreases in the influence of the family and the church in shaping social mores these changes are freeing us to become more autonomous and independent and today's citizen has a wide range of choices as to how they might play out their life (Beck and Beck-Gernsheim, 2002). Using ICTs to keep in touch from any place can satisfy our need for the social with the advantage of choice in that we can decide with whom we keep company at any time. This phenomena has led to the concept of a world of networked individuals in perpetual contact (Ling, 2004a).

While liberating for the individual, these changes have come at a price. Faster, more pressurised lifestyles have strained the commitment we might have to what many consider valued aspects of life – respect and care for the common good and obligations to shared ideals as played out in a localised community setting, the essential traits of civic republicanism (Honohan, 2002). ICTs are deeply implicated in all these changes. They facilitate and enable our progress, and help us to reform and readjust our lives to suit new demands and individual desires. Yet our preoccupation with them also takes us away from some of the older ways of life which we hold important, including face-to-face socialising and participation in group activities. Technologies such as the mobile phone and other ICTs enable us to form and maintain links with groups of others who may have similar interests but be geographically dispersed. In effect, these have enabled us to create personal communities of choice which may be replacing local geographic networks in our quest for sociability. The question is, do these virtual communities (Rheingold, 1993) have the potential to fulfil our social needs in such a way that local communities are no longer attractive? If so, they may result in diminution of social capital, and so

cause fragmentation in society. This has implications for the existence and persistence of local community groups and has caused unease among those tasked with citizen welfare. I wish to explore the veracity of these claims and see how they match the evidence coming from local active community groups.

This study also considers the discourse around the formation and erosion of community. It is recognised in the literature (Putnam, 2000 and others) that the part which local community plays in everyday life is changing, in that its importance is commonly thought to be in decline. Of particular concern is the proposition that social capital is waning. Social capital has been considered in sociological circles for some time (for example, Bourdieu, 1986; Coleman, 1990), but has in recent years been acknowledged as a desirable element within the public vernacular. Thriving social capital is considered to have positive influence on quality of life overall, and its possible weakening is felt by communitarians and policy makers to be a loss to civil society. Debates over the role of community and social capital have raised concerns about the future shape of society at large and policy makers (including the Irish government) have intervened to stimulate its growth (Taskforce, 2007a). Interestingly, one of the solutions to this 'problem' could be through the very things which are proposed to have contributed to its causation: communications technologies such as the mobile phone. In providing increased opportunities for community members to link together, they may be used to strengthen and unify the local group, and possibly also be used to allow it to grow. This is the direction of policy discourse at present: how can we use new technology such as the mobile phone and the internet as key elements of social innovation in order to help build community, improve government services and combat social exclusion.

In order to critically examine the inferences around how new communications technologies might accelerate or repair problems of community, I look at how group members exploit technology affordance specifically to manage community relations as a collective social practice. The emergent patterns of communication should

display whether technology use contributes to the strength of the social network of individual group members alone, or that of the group as an entity. This will have consequences for the development and persistence of social capital within the group.

1.3 Local community in Ireland

This study is set in the West of Ireland, a region with a traditional lifestyle based on agriculture and which has in the past been considered somewhat remote. It is an area which for many years lagged behind its European neighbours in terms of industrial advancement. The past 40 years, however, have seen changes in employment and technology use in general. A combination of factors, including government policies, has led to Ireland being a major player in the use and production of ICTs, and it now has a population who are comfortable with using technology in their work lives and who also, inevitably, integrate it into all forms of social interaction. Communications and physical infrastructures have developed in the country alongside the wealth and expectations of the population. This provides a setting where the outcomes of technical change are perhaps more pronounced and produce a more radical alteration than they might in a society which has slowly absorbed technology over time. The flowering of Ireland's technology prowess came in tandem with the world-wide adoption of the mobile phone, and a new-found surplus wealth together with a population tightly engaged in creating technology meant that the mobile phone found favour easily. Ireland may have come late to technology but its citizens have embraced it very quickly.

Alongside the faster, more demanding lifestyle created by improved economic changes in Ireland came many of the other characteristics of an industrialised society, such as increasing urbanisation and economic immigration. Citizens now spend more time commuting between home and work and are subject to new lifestyles and ideas. The power bases of church and family which might previously have dictated people's lives are also being eroded (Tovey and Share, 2003). These changes see individuals taking control of their own social circles and defining their own identity based on choice, not where they live or grew up.

This turn from more traditional ways of life has happened very rapidly, raising the question of the 'problem' of declining community as already described.

Communitarians[1] and social policy makers believe that some of the aspects of social life which were seen to be operating well in Irish society (including a strong local community life) may be lost in the rush towards industrialisation. Concerns over declining social capital and an influx of many of the ills which beset other industrialised societies but until recently were minimal in Ireland (such as gun crime and racial tension) have caused disquiet. The state has invested resources and energy in trying to redress this problem by putting in place a body which might investigate and reinvigorate the levels of social capital in the country. This body, *The Taskforce on Active Citizenship*, have researched the level of citizen participation in local community groups and made recommendations on how cooperation between citizens might be used to further the common good. This work provides background material for this thesis, and the policies emanating from it provide an interesting context for the position of community life in Ireland today.

The community groups chosen for study are sports clubs, members of the Gaelic Athletic Association (GAA), playing the games of Gaelic football and hurling. The GAA is the largest sporting organisation in Ireland, a country with a strong following of all sports activities. It has over 500,000 members. The GAA club structure was originally organised around local parishes, and clubs provide a focus not only for their games but also for general social life in the community. The sport is also played at county level, and the inter-county championships dominate sports media coverage and provide a talking point for the whole population during the summer months. Most people exhibit a strong loyalty to their local club and county (or that where they grew up) and identify closely with that label. GAA clubs are a pertinent choice for this study in that they play team sports, and therefore require the physical presence of members in order to function at all. Although their raison

[1] Communitarians generally refers to those who would support the connection between the individual and their community and who would seek to bolster social capital and the institutions of civil society.

d'être is based on face-to-face meetings (playing matches), they also have a need for frequent communications in order to coordinate club activities, and have an obvious application for mobile phone use.

A number of interesting pieces of research have been done around the place of the mobile phone in different cultural settings (including, for example, Katz and Aahus, 2002; Horst and Millar, 2006; Ito et al., 2005). Relatively little has been done from an Irish perspective. The specifics and implications of using an Irish context and sporting communities for the study are covered in more detail in chapter four.

1.4 Key research questions

The key investigation in this thesis is on the changing patterns of our socialization which have been enabled by current communications technologies and the possible outcomes of these for existing local face-to-face groups. Such questions are concerned with a big picture – the shaping of a system of interactions which make up the fabric of a body of people. However, the mobile phone is very much an individual artefact and a personal one, leading to autonomous interactions between two people. In order to see the large picture it is necessary to amass a number of smaller ones and assemble these to see how the group function together. To ascertain the role which the mobile phone plays in community life I am choosing to look from within the closed social group (sports club members and supporters) and examine how they use their own phones to communicate with each other. The strength of a community group, and the social capital it might engender, is reflected by these multiple contributions towards its common goals.

I apply the domestication approach (Silverstone and Haddon, 1996) to guide my investigation of adoption. At a primary level, investigating the human-technology relationship must engage with why individuals initially procured a mobile phone, what part it might play in their everyday interactions, and why they chose to keep it and integrate its use into practices which enable and maintain their lifestyle. These points give rise to my first research question, focused on why and how users adopted the technology. Diffusion of the mobile phone happened within a relatively short time period and it would be easy to gloss over the complexities people might have found with their choices in adoption and the techniques which they employed in order to weave its presence and use into their everyday lives. The mobile phone is not only a device for inter-personal communication, but is also considered a safety device, a fashion item and a diary, and many users would describe it as an indispensible artefact of modern life. I examine the choices they made in integrating it into their everyday activities and hope to learn about the experiences by which they have now shaped a successful integration of technology into the community. In

exploring these points I hope that we might learn for future experience how a new technology is embraced in particular by a non-technical audience.

Being a communications device means that the mobile phone is much more than a technical artefact – it has *double articulation* (Silverstone, 1994) in that it gives us opportunities to live out personal relationships and develop tactics such as 'management' and 'manipulation' of these in new ways. This imbues the device with much potential in how it might affect our lives, and the changes made in relationship management due to phone ownership form the basis of my second research question. No doubt club members use their mobile phones to combine both their private virtual links and their face-to-face links (with both members and non-members) in order to build a seamless set of social interactions. In the context of community life, the mobile phone might be used at times to enable and encourage more personal interaction (for example using it to arrange a meeting), and at other times used to circumvent meeting at all (by using talk or text to avoid a face-to-face conversation). The key enquiry here is how and why members stage-manage these opportunities to suit their own ends and the outcomes of this on the strength of the group as a whole. I then consider whether these interactions are to the benefit or the detriment of local community life and if universal contact-ability of club members might provide new opportunities for group cohesion.

In both of these research questions around adoption I was also interested to see were there any demographic factors influencing adoption and use, and so looked for evidence of different patterns by female and male adopters and by rural and urban dwellers.

My third question concerns the use of technology in community settings and the ways it might contribute to or weaken the social capital engendered through face-to-face local interaction. The communitarian theorists posit that personal technologies take us away from co-present interactions into self-chosen virtual communities

facilitated by the 'constant presence' afforded by the mobile phone (Putnam,2000). In an extreme form, one might consider that if we use the mobile phone to maintain and support a personal social network, there may not be a social function for local community groups at all, an outcome which is considered detrimental to the health of society as a whole. However, if we can practice community (and so feed social capital) through mediated communication as well as by being co-present, the mobile phone can make a positive contribution to the vibrancy of community life. In looking at changed patterns of interaction within the sports clubs, I examine the implications of mobile phone introduction on social cohesion and social capital in the everyday life of a local community group and assess its contribution to this form of civic engagement.

The two main themes of this thesis, social shaping of technology adoption/use and its implications for community life, reflect my concern to understand the relationship between 'technology' and 'society' and in particular the idea arising from studies within the social shaping of technology that these should be understood not as a process of technological determined social change (or its socially-determinist opposite) but rather as the outcome of an iterative process of mutually shaping. I therefore also wish to explore not only how the mobile phone is contributing to the community endeavour, but also how use within a community group (by the accumulated cluster of club-related calls) is contributing to the role of the mobile phone in our lives. This premise runs through all the arguments presented in this thesis.

1.5 Thesis methodology

By starting with technology use by the individual, and then looking at use by the interlinked group, I am taking a 'bottom-up' approach in this study. I hope in doing so I can provide a grounded assessment which challenges the grand theories on both the technology-society relationship and on community life.

My research questions require a close-up, nuanced view of adoption, and so I chose to explore these issues through interviewing club members and probing not just the choices they have made around mobile phone ownership, but also the reasons for these choices. In adopting a piece of technology we are influenced by the ways it is presented to us, through advertising, the media and by other users. These views offer an image of the consumer from the viewpoint of the designers and producers of this technology, who try in their own way to shape an artefact to suit that perceived user. The users themselves have their own particular relationship with the technology when they integrate both the physical artefact and its use into their everyday patterns of life. I hope that by interviewing owners when they are post-procurement I can perhaps get some understanding as to how the technology may have lived up to their expectations (or not).

In order to understand adoption fully it is necessary to look at the textured lives of users and how they negotiate using the phone to maintain and support their everyday communication practices. Interviewing can provide insights into purchase decisions and also the import which individuals might accord to their mobile phone as a possession. After a period of use, might they consider its ownership as a luxury, a fashion statement or simply as a functional addition to their everyday lives? Does its possession (and by extension its use) reflect in any way on them as a person? These types of answers can only come about through opening individuals up to talking about the role of the phone in their lives. Conversation is also the best way to ascertain how they might handle their personal relationships using the phone, specifically when they choose to call or text and for what reason. It also gives the

interviewee the opportunity to express any problems they might have had in integration and the reasons around the choices they might have made, evidence which is lost when looking at bulky statistical analysis. I use the framework presented by the domestication approach - commodification, imagination, appropriation, objectification and incorporation - to guide my way through the interview process (Silverstone and Haddon, 1996). Using an approach which has been used in other studies might provide a suitable comparative framework from which to draw conclusions.

While each interviewee may have the story of their personal phone use, it is perhaps more difficult to ascertain the patterns of use within the community as a whole. Through interview I can ask club members about their use of the phone specifically for club affairs. Of particular interest here are the responses elicited from some key members – those who carry out the essential club administration posts of secretary, manager and trainer. These are all voluntary posts, and the holders must balance their contribution to the club with the normal demands of work and family life. Any way in which using the mobile phone eases the administrator's burden is therefore beneficial to the club as a whole. The administrators are also in a position to influence the cohesion of the team or members with whom they interact, and their opinions on the flow of connections among members is particularity useful. Through open interview I can hopefully explore use of the phone as a tool to manage community affairs and as a contributor to social capital within the group.

There are millions of mobile phone users in Ireland, and it would of course be impractical in a thesis of this nature to interview even one percent of them. I therefore decided to also gather data from a survey of club members and supporters attending games. The quantitative returns from this exercise might be found to support (or not) the essential outcomes from interview and certainly give a broader perspective on use within the local community. There is also considerable secondary data available to me through government and research reports which give statistical

evidence of mobile phone statistics and citizen participation in community organisations. These may be used to supplement my store of relevant qualitative material.

The reasons for selection of these particular research methods and details of how they were carried out are detailed in chapter three. Using mixed research methods in this way can bring a number of challenges to the researcher and these, along with my proposals to overcome any limitations in my choice of methods, are also considered. The data gathered through the interview process and questionnaires is explored further in chapter five (the personal choices made by club members and their rationale for making them) and in chapter six (the use of mobile phone specifically for club communications). In chapter seven I analyse my empirical evidence.

1.6 Thesis outcomes

The members of the community groups who contribute to my questionnaire and interviews are using their technology to 'do' community. In the statistics and comments which I gather I wish to demonstrate evidence of use of the mobile phone to facilitate cohesiveness within the group as a whole.

If my findings indicate that local communities thrive and grow in a time of (or despite) increasingly available virtual communities, then individuals are in effect blending the two by judicious use of technology to receive an enhanced social life. In effect, the device is then being used not to replace, but rather extend and enrich the sense of community overall. The outcome of this for a local club is that members, through the increased ways in which they can contribute to the club as a whole, will strengthen their social capital and create a strong and flourishing sports club.

Office-holder members of a sports club have added responsibilities towards the community group in that they carry out administration and coordination, jobs often similar to those performed in an office environment. The mobile phone has the potential to be a useful tool for those who volunteer their time to work with community groups as they are required to be easily contactable. Identifying the degree of their use, and its import to the community group as a whole is valuable in determining its potential for group management.

My research approach, domestication, was originally devised to investigate the bringing of technologies into a shared household space. Its success (or otherwise) when applied to studying a personal technology can be considered an evaluation of the approach itself, and its flexibility as a framework for study. Through my experience I intend to draw some conclusions on the usefulness of domestication to structure a study such as this.

I have to date published two works based on this research:

Byrne, P. (2007) 'Inside the circle: using broadcast SMS in a sports club', published online in *Observatorio (OBS*),* peer-reviewed online journal, 1 (3) http://obs.obercom.pt/index.php/obs/issue/view/9 (Accessed; 27th October 2013) .

Byrne, P. (2011) 'There's an off-line community on the line', in Ling, R. & Campbell, S. *Mobile Communication: Bringing us Together and Tearing us Apart*. New Brunswick, USA: Transaction Publications.

These are included in appendices 8 and 9 respectively.

Chapter 2
Literature Review

The mobile phone has very quickly become an artefact of both working and social life, and has been integrated into the routines of everyday communication with a relatively smooth transition. In order to stand back and reflect on its development, its meanings to the individual user, and its significance to community life, it is necessary to draw upon a number of research fields. These include adoption and domestication, consumption studies, the diffusion of technology, cultural studies, community studies and the analysis of social networks as well as specific studies on the device itself.

Any study of the engagement of humans and technology must begin with the existing research on how the people of a society accept or reject the technology's potential to reorganise the status quo, and how they inhibit or encourage its role in doing so. The theories and approaches of Science and Technology Studies (STS) consider how the social, historical, economic and cultural environment in which technology is deployed gives it particular meaning, and in return how the technology influences the environment in which it is created and used. STS also considers any differentials in acceptance of technology by specific groups, and in this thesis I am specifically considering any urban/rural divide or gender difference in acceptance and uptake. Since the specific technology considered here is a communications device, research work in the area of media and communications studies also has a contribution in interpreting the special nature of how we use the

mobile phone to reach out to each other. Existing work on both these research areas is covered in section 2.1.

Mobile phone use is today commonplace and has become a normalised mode of interacting with our family and friends. Bringing the private communication which it affords into the public spaces we inhabit has enabled us to change the boundaries of conventional locations of personal communication; however, it has also been disruptive due to the way being in perpetual contact has affected our relationships with others. In our adoption of the mobile phone as a new media form we have also given meaning to the artefact itself, and have attached particular import to its ownership and use. Section 2.2 examines how we have carried out the transition of the mobile phone into being an accepted everyday technology and how this has possibly impacted the strength and frequency of our links with others, both inside and outside our existing social circle.

The focus of this thesis is an examination of mobile phone use within semi-formal organisations, where members give of their time voluntarily to maintain a forum for social interaction (in this case a sports club). Taken from a societal perspective, the freedom to set up and participate in such groups is considered a function of a healthy, functioning liberal democracy, and many governments encourage their formation as having a contribution to the social welfare and quality of life of their citizens. The increasing complexity of modern life, and in particular the integration of electronic technologies into our everyday practices, often induces the belief that we are losing the quantity and quality of our interactions with others. However, communications technologies in particular have a role to play in keeping social networks together, and possibly even strengthening them. Section 2.3 examines the evolving role of community groups on our social organisation and the contribution of technology to their persistence and strength.

2.1 The technology – human relationship

This section examines how we interact with technologies and find a place for them in our lives. It begins with a critique of deterministic views of this relationship, and proceeds to develop a social shaping approach. I then look at theories of consumption and diffusion and show how the Domestication model (Silverstone and Haddon, 1996) can be a useful framework for examining everyday use of technical artefacts. Communications devices differ from more passive technology devices (such as a washing machine) in that they influence our choices in maintaining relationships with others. I look here at this double articulation and describe any observed differences in use by female/male and rural/urban users found in the literature.

2.1.1 Deterministic views on technology and some responses

Early studies of technology, concerned with understanding the social implications of the introduction of new tools, knowledge and expertise, set the artefact as a focus of change and examine how it might act to change how we work and organise our lives. Termed *technological determinism*, this analysis purports that new technologies have impacts on society which drive social change (Smith and Marx, 1994). It suggests that the role of a progressive society is simply to adapt to the changes wrought, and our part is merely to mitigate any negative effects of the inevitable outcomes. In its more extreme or 'hard' forms, technological determinism would advocate that the human is totally passive in this relationship, following where the artefact might lead, and that the consequences of our actions dictate both our history and our future. However, this is a one-dimensional and somewhat flawed analysis (Tenner, 1997).

More modified, 'soft' forms of technological determinism are easier to accept – they recognise that technology has impacts, but that there are social influences at work in the outcomes we observe. These are due not only to our human input in creating the artefact, but also how, as designers and builders, we imbue it with specific

perspectives of how it might be used, giving the artefact its own politics (Winner, 1988; Latour, 1992). When we accept the premise that even inanimate objects might be possessed with a political (and therefore social) dimension then we have no way of escaping social influence and we must acknowledge that even objects cannot be unbiased.

While forms of technological determinism are still accepted as providing us with some explanations, it is now recognised that as a theory for the human-technology relationship they provide an overly simplistic solution. Understandably, sociology has attempted to reform this approach and examine the means by which we shape technology just as much as it shapes us. However, initial 'new' approaches, perhaps as a counter-reaction to technological determinism, veered towards the more extreme ends of social determinism. One of the first was that of the Social Construction Of Technology (SCOT), developed by Trevor Pinch and Wiebe Bijker and further developed by others (Pinch and Bijker, 1984; Bijker, Hughes and Pinch,1987; Bijker and Law, 1992; Bijker, 1995[2]). They proposed that new technologies are subjected to *interpretive flexibility*, in that they relay different meanings to different *relevant social groups*. Whilst the artefact is under development, its form is negotiated through the interests and influences of these groups, eventually reaching a final agreed state, termed *closure*. While a useful interpretation, SCOT has its limitations, and questions surround all of the key aspects: Who are the included relevant groups[3]? Does their composition ignore the

[2] While Bijker uses the SCOT model in his analysis of bicycle history in this book, he does not see it as a 'catch all' philosophy. He extends his analysis to incorporate scenarios where there is one dominant technological framework (using the case study of Bakelite), or two or more competing frameworks (his case study of florescent bulbs). In these the individual end users of technology have a minor role.

[3] The shortcomings of the 'relevant groups' aspect of SCOT are encapsulated by Langdon Winner when he states: 'But there is the annoying question for political pluralism that can be posed for social constructivism as well. Who says what are 'relevant' social groups and social interests? What about groups which have no voice but which nevertheless will be

basic conditions of inequality which underlie social interaction such as age, gender or class? When do we get a consensus on closure? SCOT has in ways been beset by the theories of the Sociology of Scientific Knowledge (SSK) on which it is based, which has given it perhaps an overly social bias (Williams and Edge, 1996).

The Actor-Network Theory (ANT) attempts to right some of the limitations elucidated by SCOT's critics (Latour, 2005). It affords influence not only to people, but also to artefacts, in fact to all elements of the technology. Each of these are seen as *actors,* both human and non-human, which are interlinked in a *network* and result in a form which is contingent on every part remaining stable. A very systematic approach, ANT also has points of contention. For instance, which entities are to be included as the actor nodes of the network are the subjective decision of the analyst, and the concept of the network implies a multi-stranded linkage between entities each having an equal role and bonding effect. In fact, the *seamless web* (Hughes, 1988) created by ANT suggests a fabric united and unyielding, and built from a uniform cloth. Hård challenges the harmony proposed by these cohesive networks, and opines instead a social conflict view, in which '…technology is applied and technological change is fostered by groups to preserve or alter social relations…' (Hård 1993, p409). This perspective of conflict closes the gap with more traditional sociological concerns in that it allows the recognition of power struggles exerting an undue 'pull' in the direction of technological development. It also meets the problem that models of technology do not embrace the concept of closure in the way those of science might, as it is difficult to ascertain when a technological artefact has fully evolved.

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affected by the results of technological change? What of groups that have been suppressed or deliberately excluded? How does one account for potentially important choices that never surface as matters for debate and choice?'(Winner 1993) .

In the face of such criticism, both SCOT and ANT have become more elastic in their interpretation. Room for this was already built into the models: in SCOT, the idea of interpretive flexibility suggests a non-rigid interpretation of events, both at the time and in historical perspective; in ANT, the classification of what was an 'actor' was left open and the definition of the sociotechnical ensembles created could be applied to a machine or to the institution in which it is fostered.

One further area of dispute within STS is the question of eligibility of authorship. Can the sociologist fully understand a technology which they only know from the outside? Does one not need the expert inside knowledge of the designer/engineer to fully comprehend the nuances of the forces which shape our technologies? Does one need to be an expert in the detailed intimate history of the device in order to analyse its emergence?[4] Such arguments over who is qualified to comment are not going to be resolved easily. However, they will ensure close attention to applications of the theory.

Finding a balance in the continuum between technical and social determinism is not easy. Many of the social studies examining the evolution of technology have taken an historical perspective and are case-study based, describing in detail one artefact and how it was designed, accepted and used (for example: Pacey,1983; Bijker, 1992; Law and Callon, 1992; Bijker, 1995). Such examinations usually lead to a view weighted towards the social. As closely-focused micro studies, they attract the criticism of philosophers and historians who believe they ignore the bigger picture, a macro view which focuses on impacts and hence leans more towards technological determinism. Conversely, macro views are considered by sociologists

[4] Clayton exemplifies this when he questions the validity of SCOT by revealing minor inconsistencies of reported history on which Bijker bases his model of the safety bicycle (Bijker, 1995), which is one of the underlying in-depth studies used to illustrate and develop SCOT (Clayton, 2002). Clearly a micro-micro approach!

as being overly simplistic and not paying attention to the fine distinction of competing forces which have fashioned the technology. Thomas Misa (1988) reasons that one's view of the role of technology depends very much on where one is standing, and our discipline of origin places us on the micro/macro scale as shown in Figure 1.

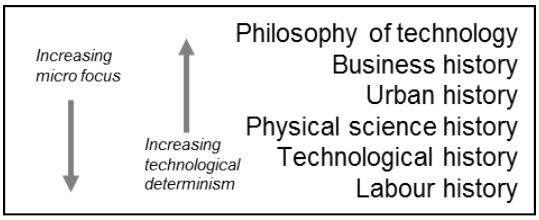

Figure 1. Relationship between socio-technical focus and disciplinary viewpoint (after Misa, 1988, p309)

This would suggest that when we are at the micro level, we are so absorbed by what is happening 'in the box' that we can't see the bigger picture, while when at the macro level we are standing 'outside the box' and ignoring its contents, thus over simplifying the situation. Both micro and macro approaches are also found to fall short when one attempts to include the role of commercial and political influences on the emergence and acceptance of a technology. In response to this dilemma, another plane of influence (termed the meso level) is frequently used as an intermediate tier (Sørensen and Levold, 1992). This does not overcome the shortcomings of micro and macro approaches, but rather attempts to close the gap between the two and add to an overall complete picture. While it does provide a category for the influences which were previously excluded, it creates another stratum to be somehow merged into the overall picture of technical-social relations.

2.1.2 The Social Shaping of Technology

In this thesis I acknowledge the work of ANT and SCOT, but adopt the more flexible (and perhaps less reductionist) approach , that of the Social Shaping of Technology (SST) (MacKenzie and Wajcman, 1999; Williams and Edge, 1996). I examine the use of the mobile phone from within a local community group, letting

the users themselves express how they came to acquire it and weave it into their own patterns of communication. While many of the theories described above are based on the evolution of new technologies, my study looks more at its ongoing use, and how these community members are currently performing their personal communications through it. However, social and technical relationships come into all aspects of this enactment, in particular with the reasons for adoption and the current attitudes of users towards its role in their lives.

Because social shaping has at its heart the concept of choice in the design and direction of any innovation, it accepts that there are many possible ways in which a technology might develop, predisposed by the political, economic, cultural and social influences of the time in which it evolves. This can be seen in the targeting of a technology for a specific use or set of users and is explored in semiotic approaches to technology-human analysis (Woolgar, 1991; Latour, 1992; Akrich, 1992; Akrich and Latour, 1992). These would suggest that there are preferred meanings encoded (or *inscribed*) into an artefact by designers based on their ideas of how it is to be used.

In the creation of a new technology, the user exists only in the mind of the designer and in order to meet their needs from the artefact it is necessary to decide how this imaginary user might act. Technical experts have their own language and levels of understanding and these specialist assumptions are often in conflict with modelling the life of a consumer who may have little knowledge, or even an antipathy to, the target technology. Silverstone and Haddon describe this as *Constructing the User*:

> … In this sense of design, images of eventual users are incorporated into the fabric of the object, but at the same time users are designed themselves – as ideal or as necessary to complete both the function and vision embodied in the artefact. (Silverstone and Haddon, 1996, p45)

Critiques of the designer-user interface have focused attention on these socially-shaped designer images of how users perform (or how the designer might wish

them to perform). Steve Woolgar gives an interesting look into the mind of the designer when he joins a design team working on a new model of personal computer. He encounters a view among designers which places the user outside the technology, as a body which may interact with it in a 'wrong' manner. He concludes that: 'users are configured to respond to the technology in sanctionably appropriate ways.' (Grint and Woolgar, 1997, p93). In effect, the user who does not take on their assigned role is considered to be performing some incorrect action. In some cases the design is modified to limit user action and prevent interventions which might 'harm' the machine or inhibit it performing to maximum capacity[5]. This is what Akrich and Latour describe as *prescription*: 'What a device allows or forbids from the actors – humans and non human – that it anticipates; it is the morality of a setting both negative (what it prescribes) and positive (what it permits).' (Akrich and Latour, 1992, p261).

However, manufacturers are becoming increasingly aware that they cannot anticipate all of the ways a user might use (or misuse) an object, and they are often willing to build new (innovative) uses into subsequent models, exhibiting social shaping through a return cycle of co-production. David Noble describes this as technology leading a double life:

> Close inspection of technological development reveals that technology leads a double life, one which conforms to the intentions of the designers and interests of power and another which contradicts them – proceeding behind the backs of their architects to yield unintended consequences and unanticipated possibilities. (Noble, 1984, pp 324-325)

[5] Akrich describes an instance of this in her study of a photoelectric lighting kit designed in France for an African market. Users were given no control over adapting or maintaining the lighting systems, a situation which may have worked in France, but caused extra complications in the African setting (Akrich, 1992).

A classic example of this is how the fixed line phone was aimed at business use and any social conversations on it were considered wasteful and frivolous. However, persistence by telephone owners (and in particular women who used the phone for maintenance of kinship relations) eventually altered the dynamic to such an extent that phone companies began to encourage their subscribers to chat more on the phone (Mackay, 1997, p273). Such turns of event provide the concept of a 'return cycle', where the user devises new ways of using the device and the producer responds with technology to meet these, meaning that we can no longer envisage a linear path from designer to producer to end user. This has also been evident recently with the advent of web2.0 activities, where 'it no longer holds to conceive of users as 'end users', as they have moved into the heart of the value chain.' (Slot and Frissen, 2008, p195).

One other approach to the study of sociotechnical systems is worthy of note. du Gay et al. lay down a *circuit of culture* approach for studying the role of a piece of technology (du Gay et al., 1997). They see this as comprising five interlinked processes: representation, identity, production, consumption and regulation. These five set the framework to examine the biography of a cultural artefact, in their case the Sony Walkman. While this approach provides a comprehensive and holistic way of looking at the meanings of the artefact as shaped by and as shaping society, it encompasses a wider scope than desired in this thesis, which has less concern with the production or regulation cycles. The framework has been applied to the mobile phone already in Goggins's account *Cell Phone Culture*, which is an interesting and inclusive story of the mobile phone in everyday life (Goggins, 2006).

2.1.3 Consumption and Diffusion of technologies: 'catching the consumer'

Much as consumer technologies may be seen as negotiations between the social and the technical, it must be remembered that they are also subject to economic influences, as most artefacts are made for profit rather than function. This brings in another set of influences to bear on the emergence of any new innovation – how it is

marketed and sold. As described, a product ready for market is already embedded with prescribed characteristics which suggest its target audience and attempt to determine its future trajectory. The next stage of its lifecycle is *diffusion*, the process by which a population comes to adopt the new idea or product.

The classic synopsis of the field of technology diffusion is that of Everett Rogers in his *Diffusion of Innovations* (Rogers, 1995). In this rather structured work, Rogers examines how innovations are adopted and lists concrete factors which determine the patterns of adoption. He recognises the social perceptions of certain inherent properties of the artefact itself as being important for its adoption. These include its relative advantage to the consumer and compatibility with their existing values and needs. Important also are its simplicity of use, availability for testing and the visibility of its impacts. He sees the communication of these factors as being the key process in innovation diffusion, and recognises the influence of innovators, change agents and opinion leaders in 'spreading the word'.

Rogers profiles innovation adopters and maps them to a normal curve (Figure 2). He considers members of a social group absorbing the technology through the stages of knowledge (first encounter), persuasion (forming a favourable attitude), decision (to adopt), implementation (putting to use), and confirmation (absorbing within their lives).

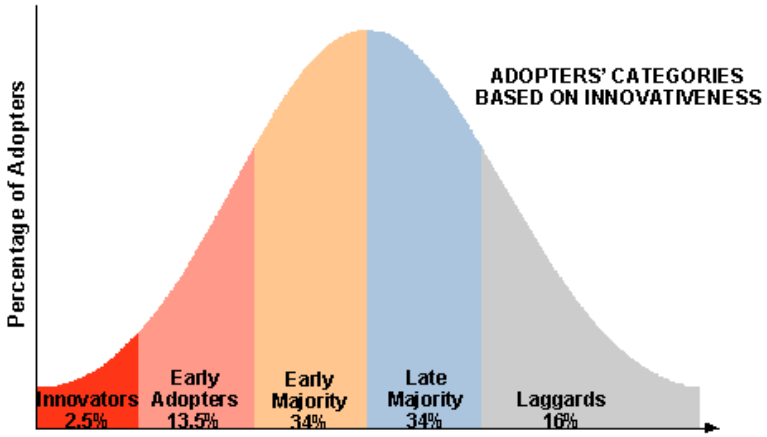

Figure 2. Adopter categories as defined by Rogers, 1995

The cumulative version of the adoption graph follows an s-curve as shown in Figure 3, where diffusion is initially slow, then accelerates until it reaches a period of 'take off' from which adoption continues rapidly until slowing again as the market reaches saturation.

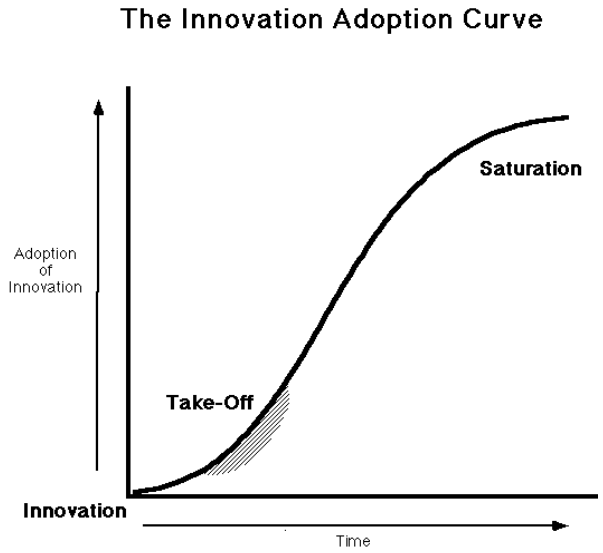

Figure 3. s-curve showing cumulative adoption of innovation (Rogers, 1995)

While Rogers's theories are popular with manufacturers of new products in that they provide prescriptions for marketing strategy, they have some limitations for

the sociologist. Firstly, he assumes that all consumers are rational actors, which is not true for all our social interactions. Also, fitting his categories of adopters to standard deviation categories of a normal curve is a rather neat split for human behaviour. In practice, it can be sub groups of the population who adopt the technology en masse, while other subgroups are much slower to embrace any new innovation. For example, for a period, mobile phone purchases were more widespread among the teenage subgroup of the population than older age groups and the curve produced by Rogers would not necessarily be indicative of the purchase patterns of the population at large. Rogers's theory of diffusion ends with adoption; he does not investigate the further step of ongoing use.

However limited, Rogers's model has proved a valuable hook for research, and some interesting work has been based on it. Donald Norman uses a modified version to investigate the movement of an innovation from a technology-centred to a consumer-centred device (Norman, 1998). He suggests that the functionalities provided by devices (such as the personal computer) also follow an s-curve: early adopters want technology and performance, and this drives early development. Once the technology has been developed to a level where it meets the basic needs of most consumers, the technology will 'take off' and any subsequent product performance enhancements do not further its appeal to the majority. Norman uses this interpretation to draw up a model which splits the marketplace chronologically into being technology-driven or consumer-driven and uses these insights not as a guide to marketing but to anticipate the future of information devices. His analysis is illustrated by the model in Figure 4.

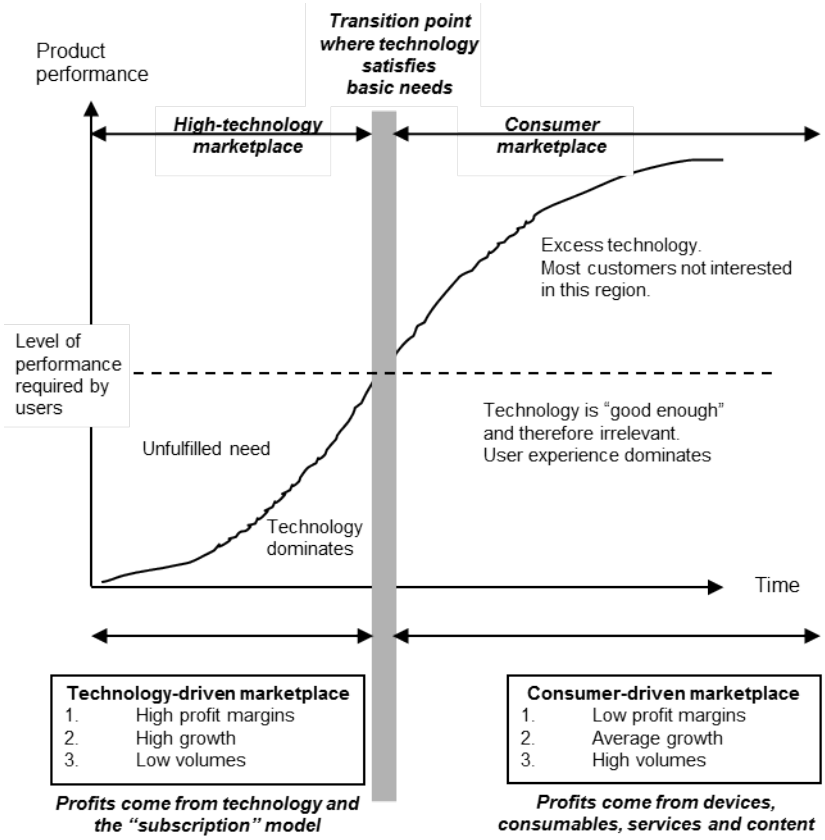

Figure 4. Product performance curve (Norman, 1998)

Although imbued with the limitations of the Rogers model on which it is based, Norman's extrapolation can be applied to many consumer devices, such as washing machines, irons, food processors or computer software in that most users only use a small percentage of the functionality offered. He claims that 'When technology reaches the point that it satisfies user needs, consumers no longer seek the best technology; they seek the most convenient one, the one with the most satisfactory user experience, the lowest cost and the highest reliability.'(Norman, 1998, p251).

Norman names technologies in the consumer-driven marketplace as *invisible*, but they are also often described as *mundane*. Generally this term is applied to technologies that are commonplace and used by a lot of people. We often think of these not so much as a technology, but as a preordained part of the world around us. A classic study of such a mundane technology is that of the door mechanism examined by Latour (1992) in his study of 'a few mundane artifacts'. There is an

inevitability that many objects become mundane after a time as '…technologies which are intended and developed for mass use, if appropriated, are doomed to become unsurprising, mundane and perhaps even disparaged, like the trick that the audience has seen too many times' (Dourish et al., 2010, p176).

An alternative view of the diffusion of technology is that of Brian Winston who takes an historical approach in his studies. Winston considers a body of knowledge or competence (which he terms 'science') to be the basis for any technological development. He then envisages this knowledge undergoing a series of transformations produced within the social sphere. The initial transformation is *ideation* – a hypothesis of application for the knowledge base. From this a prototype is developed. The next transformation is that of *supervening social necessity*, which works to move the prototype from the laboratory into the world at large. This creates a 'fertile ground for innovation' which leads to invention and moving into the marketplace. From here, however, movement is not seen to be a direct upward path, rather it is slowed by another transformation, in this case by what Winston terms the *law of the suppression of radical potential*. He describes how '…Constraints operate to slow the rate of diffusion so that the social fabric in general can absorb the new machine and essential formations such as business entities and other institutions can be protected and preserved…' (Winston, 1998, p13). This conflict between social necessity and its suppression causes a tripartite phase of technological performance – production, spin-offs and redundancies. Winston's model is illustrated in Figure 5.

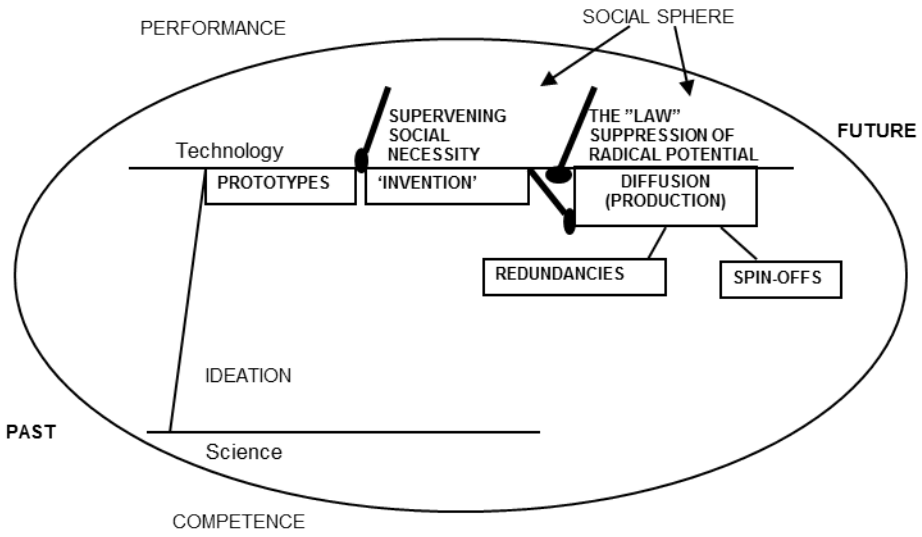

Figure 5. Model of diffusion (Winston, 1998, p14)

Winston uses this model in his study of the history of media devices (from the telegraph to the internet) which he uses as a polemic against the idea of an information revolution. Winston's model is more of a 'grand theory', ignoring the foibles of individual consumers and their choices to instead concentrate on the progress of the technology itself. To a certain extent he gives the technology a life of its own, modified by the social setting, which could almost be considered a socially refined form of technological determinism.

2.1.4 The Domestication of technology

While diffusion theories attempt to explain the acceptance of a technology by the population as a whole, they shed little light on the practices in integrating it into everyday life. The *Domestication* framework was designed to do just this (Silverstone, Hirsch and Morley, 1992; Silverstone, 1995; Silverstone and Haddon, 1996). This is not a theory per se, but rather an approach to examining the steps we take in absorbing new technologies into everyday life. Sørensen points out the attraction of domestication as an analytic approach:

> The concept of domestication was attractive in two main regards. First it presupposed that users play an active and decisive role in the construction of patterns of use and meanings in relation to technologies. Second, it suggested that a main emphasis

> should be put on the production of meaning and identity from artefacts. This meant a fundamental break with technological determinism as well as a move away from a long-term tendency to interpret technologies in mainly instrumental terms, as purposive tools. (Sørensen, 2006, p46)

Domestication offers a flexible and useful path in examining technology adoption, and has been modified and refined through time to produce a well-understood and beneficial structure of enquiry. For this reason I use it in this thesis to guide my data gathering and analysis.

An early work describes domestication as 'the taming of the wild and the cultivation of the tame' (Silverstone, 1995, p64). The metaphor suggests here that the incoming technology is initially disruptive in that it challenges our personal routines, but we change to make it familiar in a way that helps us maintain the structure of our everyday practices. There are a number of stages in this process, referred to as appropriation, objectification, incorporation and conversion.

A new piece of technology leaves its designers and undergoes *commodification*, 'the process through which objects and technologies emerge in a public space of exchange values and in a market-place of competing images and functional claims and counterclaims.' (Silverstone and Haddon, 1996, p45). The designed artefact is now a consumer item. Domestication considers how we engage with the promises and images presented to us by the designer, employing *imagination* to consider how the object which we see advertised or in our friend's possession might enhance our own lives. We enter a cycle of engagement when we buy the artefact, the step of *appropriation*, and then find a place for it within our established environment (*objectification*) and fit its use into our regular pattern of life (*incorporation*). The actual exchange of money for the object is a transformatory act – it bridges the boundary between fantasy/imagination and reality. The final stage of the domestication process is *conversion*, which is the making public our use of the artefact, '… it signals the importance of the need to legitimate one's participation in

consumer culture in the display of competence and ownership.' (Silverstone and Haddon, 1996, p65).

In the imagination stage, potential adopters may be enticed by images they see in advertising campaigns or observe the technology in use around them. They identify with the product, person or opportunity in question and begin to envisage themselves as users too. Imagination is in this case a leap into the future, thinking about what might be if they were to possess the item. Haddon describes the role of imagination in the domestication of household objects:

> ICTs come into consumer perceptions with their meanings pre-formed. This results from such processes as advertising, design and surrounding media discourses. But afterward households and individuals invest them with their own significance. This includes the effort involved before acquisition in imagining how they might find a place in the home and a role in people's lives, the household discussions about the decision to acquire them and the process afterwards of locating these ICTs in domestic time and space. (Haddon, 2003, p44)

Appropriation is where we accept that an artefact will be relevant and useful to us, and we make the choices over purchase. Possibly confused by the claims made by manufacturers, many people call on someone who might help advise their purchase. This could be with technical or practical advice, recommending (or not) a particular model, or supporting the buyer in what to look for in their purchase. The role of personal social networks to support ICT acquisition and use is well documented, in particular in studies of internet users (for example, Haddon, 2004). Bakardjieva describes such an educator as a 'warm expert', someone who can operate in the world of technology, but is also:

> … immediately accessible in the users' lifeworld as a fellow man/woman. The warm expert mediates between the ethnological universal and the concrete situation, needs and background of the novice user with whom he is in a close personal relationship. (Bakardjieva, 2005, p99)

This is particularly useful for the novice user who might require a supporting influence in easing their passage as a new user. Stewart specifically examines the place of such friends in the domestication process. He terms them 'local experts', and describes their role as 'bridges or channels', who:

> … can provide moral leadership and act as a demonstrator to other people who share similar values, resources or 'lifestyle' … in the network, but is more likely to be a source of practical knowledge, skills and information… (Stewart, 2007, p563)

Once we have made the decision to buy, it is necessary to find a space and time to fit our new purchase into our everyday lives. Decisions over when and where we might use it and the alterations necessary to our previous daily patterns are part of the objectification and incorporation processes. This can be considered as the '…process through which artefacts are defined and placed in a way which may imply redefinitions of one's own routines and practices.' (Lie and Sørensen, 1996, p9). Objectification identifies the spatial aspects of integration (for example, where we place and keep it), and incorporation identifies the temporal (when we might use it). This has implications for our sense of identity - we are now technology users. Conversion is 'the final turn in the cycle …[in] that the object becomes an element in others' estimation of us' (Ling, 2004a, p30). Here we are recognised as being someone who acknowledges and uses the object by the outside world, which may in turn alter their view of and interactions with us.

In original interpretations of the approach the term domestication was also used to imply the setting for consumption - that of the household. This may be applicable when studying an item such as a television or home computer in that the item is large and shared, requiring a negotiation of rules of use. For a personally owned (and controlled) artefact such as a mobile phone, domestication into the wider household is only relevant insofar as the phone might be used to change the relationships among those with whom the owner lives. However, if one replaces the word 'household' with 'personage' and looks at how the individual as an actor

(and as a place) needs to change in order to accommodate this new artefact, a type of 'personal domestication' can be recognised. Silverstone et al. describe what domestication offers in an early paper:

> It is to provide a framework for an understanding of the complex interrelationships of cultures and technologies as they emerge in the practices of institutions and individuals, and through the unequal but never totally determining or determined relations of public and private spheres. (Silverstone, Hirsch & Morley, 1992, p26)

This is what I hope my use of domestication will provide in this thesis.

2.1.5 The special nature of communications technology

One major factor which influences our relationship with a specific technology is the nature of the technology itself. Being a communications technology, the mobile phone offers different aspects of engagement than, say a refrigerator or an ATM. While we can use general social shaping theory to consider a communications device as a technical object, and examine its meanings as a consumer artefact in its own right, we can also need to look at it with respect to the opportunities it offers us to manage our relationships with others. In this it is an artefact of *double articulation*. This feature is one which is widely recognised in cultural and media studies. Sonia Livingstone summarises the concept of how media technologies can be considered not just as 'objects of consumption', but also as 'portals to other worlds'. In evaluating the work of the late Roger Silverstone, one of the originators of the term double articulation, she states:

> Through the concept of double articulation, Silverstone (1994) contrasts the analysis of the media qua material objects located in particular spatiotemporal settings with the analysis of the media qua texts or symbolic messages located within the flows of particular socio-cultural discourses, precisely in order to demand that we integrate the two. By implication, the public is also doubly articulated as consumer-viewer or, for new media, consumer-user. Moreover, research should also be doubly articulated, connecting theories of consumption, economics and domestication with theories of representation, interpretation and influence. (Livingstone, 2007, p18)

The challenge here is to incorporate in our research methods an examination of both how we perform technology, and what we are performing through it. In the case of the mobile phone, the former might include aspects such as where we keep it, how we decorate and display it, and how and when we use it in public places. The second articulation includes how we use it to manage (or even manipulate) our relationships, based on the regularity of our contacts and the mode (voice call or SMS) which we use, as well as the content of the links which we make. I hope to integrate both aspects when examining community mobile phone use.

Some researchers would carry the multiple articulation thesis further, and pose another, third expression, based on the actual content of the messages carried (Hartmann, 2006). In fact, it might even be possible to distinguish a further, fourth point of analysis, that of the language used to express those messages, as used by Hutchby in his examination of conversations and technology (Hutchby, 2001). However, while it may be useful to be cognisant of the many levels with which we engage with technology, incorporating all of them into a study such as this might widen the scope in ways that preclude meaningful analysis.

2.1.6 Differential use and uptake of technology: gender and rural-urban variations

Accepting the premise from STS that technology and social relations are mutually shaping introduces the fact that power relations in society at large can produce differential use and uptake of a technology. This brings into play the long discourse about technology and gender, concentrating on the low uptake and little apparent interest by women in science and technology (Cockburn, 1983; Faulkner and Arnold, 1985; Kramarae 1988; Wajcman, 1991; Kirkup and Smith Keller, 1992; Probert and Wilson, 1993; Plant, 1997; Wajcman, 2004). Essentially these writers conclude that in western society we construct technological competence as a masculine culture and by extension, women's reluctance to engage can be associated with an expression of their femininity:

> Technology is ... a cultural product which is historically constituted by certain sorts of knowledge and social practices as well as other forms of representation. Conceiving of technology as culture reveals the extent to which an affinity with technology has been and is integral to the constitution of male gender identity. (Wajcman, 1991, p158)

Early studies associated masculine technologies with heavy industry, mechanical devices and military technology, but from the 1980s the focus turned to workplace and domestic artefacts, studying for example the microwave (Cockburn and Ormrod, 1993), the VCR (Gray,1992) and latterly, computer technologies. As a technological artefact, the computer has had a mixed press with respect to its gendering. Women did play an important part as programmers in the early days of mainframe computing (even within military settings) when the machines were tools to aid calculations, and similarly women were the first users of early office computers which functioned as sophisticated word processors. In both these cases the machine was used to support tasks considered to be clerical (and female) work. However the development of more sophisticated software and the advent of personal and home computers told a different story:

> The world of computers and their connections is increasingly the world of men: as more research is done in this area and more findings are presented, the more damning is the evidence. Men have more computers, spend more time with them, and are the dominating presence in cyberspace. (Spender, 1995, p166).

There has been a slight shift in theoretical perspectives within gender-technology studies in more recent writings. As Judy Wajcman states in her 2004 work *Techno Feminism:*

> Technology was seen as an extension of patriarchal and capitalist domination. As a result, feminist approaches mainly dismissed techno-science as inherently patriarchal and malignant. There has been much criticism of the all too common tendency to treat women as passive victims of technology. (Wajcman, 2004, p29)

Here Wajcman admits that traces of this deterministic attitude are evident in her own work, but it is now time to take a more optimistic view of how technology can

be used as an agent of change: 'We do need to address current technology with a sensibility different from that which has informed feminist attitudes to science and technology in the past.' (p30). Certainly women appear to have embraced computing technology universally, although they are perhaps not as avid or enthusiastic users as men, and are still very under-represented as creators or producers.

The history of the (fixed line) telephone is often quoted as an example of differential use of technology by women (Rakow,1988; Martin, 1991; Fischer, 1992; Lohan,1997; du Gay, 1997; van Oost, 2003). Although telephone diffusion followed a steady rise in North America in the early days of the twentieth century, it was not used solely for the purposes desired by its designers. They had targeted businessmen in urban areas and, with the exception of some wealthy homes using the telephone for household management, believed that this was to be their main customer base. However, use of the phone for social interaction, or 'visiting' with friends and neighbours grew to be a major use, particularly by women who were geographically isolated in rural areas and the new suburbs. Yet this use of the telephone for purely social reasons remained anathema to its marketers until the 1920s in North America, and perhaps 20 years later in Europe. Fischer suggests why this was so:

> Industry leaders long ignored or repressed telephone sociability, for the most part, I believe, because social conversations did not fit their understanding of the technology. Feeding these attitudes, no doubt, was the common perception that women made the most social calls and their conversations were not serious. That view, in turn, may have reflected a general close-mindedness toward people different from themselves. (Fischer, 1992, p81)

The outcome of the persistent use of the telephone by women for 'kin-keeping' was a general changing of the original inscribed meaning of the artefact. van Oost points out how aberrant (social) use of the telephone shaped its eventual role in our lives:

> ... the appropriation of the telephone by female users not only (re)shaped femininity, but also the telephone itself was being reshaped ... The telephone, originally designed

> and marketed as a business communication tool, was gradually transformed into a more general instrument of social communication in the private domain.(van Oost, 2003)

In another example of the 'double life' which technology might lead (Noble, 1984), the public at large began to demand telephones in the home and the increasing number of providers willing to meet that demand required the telephone companies to reshape their attitudes to social use of the telephone if they were to remain competitive.

At the heart of this story is the proposition that men mainly make instrumental calls (defined as making appointments, shopping, seeking information) and women make intrinsic calls (those used for personal communication), and this has been backed up by a number of empirical studies based on the fixed line phone (Maddox, 1977; Rakow, 1988; Moyal, 1995; Lohan, 1997). Covering studies in New York, Australia, Ireland and the Midwest USA, these demonstrate that the concept of womens' telephone networks is obviously a global phenomenon, with women doing both 'gender work' and 'gendered work' in using the phone for care-giving efforts to hold the fabric of family and community together.

Today one might say that the fixed line telephone has become almost invisible as a domestic artefact – its absence is more remarkable than its presence in most western homes. And yet gender relations with the artefact continue to change, just as gender roles are changing within our society. In particular, a targeted campaign by the telephone companies to convert the feminine culture associated with the telephone into a more neutral one has seen the conversion of 'chat' from being a frivolous use of the telephone to being a constructive building of human relations. An example of this might be seen in how the telephone companies chose to promote social use in the 1990s. Recognising (after more than a century!) that telephone chat was good for business, British Telecom (BT) ran a campaign in the UK encouraging men to chat on the telephone with the catchphrase 'It's good to talk'. These advertisements

presented an array of cultural images of telephone use as if they were taken-for-granted. In particular, they advertised with the slogan 'Why can't men be more like women?'. While the cynical might see 'it's good to talk' in terms of 'it's good to use our telephone', these images once more sought a redefinition of gendered telephone use, to create an artefact which is perceived as being culturally gender-neutral.

Another area of differential use, but one which has been covered less comprehensively in the literature, is that of a rural-urban divide (Fischer, 1992; Castells et al., 2007). The nature of urban and rural life and the differences between them is one which ran through early sociological enquiry. The 19th century sociologist Ferdinand Tönnies studied the changes which came about through industrialisation and which considered the growth of urban life as something distinct and progressive, with a rural equivalent more backward in terms of education, income and technology (Tönnies, [1887],1965). However, interest in the urban-rural divide has waned in contemporary writings, and some would say that examining their distinctions is becoming less relevant: 'as the urban-rural discourse develops, the otherness of rurality disappears and the recognition of a sense of modernity's need for otherness becomes more repressed' (Bonner, 1998, p185). However some more recent studies still see the distinctions as 'Real and Relatively Important' (for example, Stern and Wellman, 2010). I include an urban-rural analysis in this thesis as I believe that it has potency in examining the use of mobile phones in community groups.

The demographic profile of rural dwellers has seen many changes in recent decades, and rural lifestyles are increasingly coming into line with those of their urban counterparts. Gilligan has described many categories of modern rural dweller, including cohorts such as city workers who choose to move to the countryside as it is perceived to provide a better lifestyle for families and young couples who cannot afford the high prices of city accommodation (Gilligan, 2003). This means that the

concept of an urban-rural dichotomy of lifestyle might now be better thought of as a continuum:

> ... many people today reside in one type of area but work in another, maybe far away. This implies that the sphere of their everyday life expands over several localities, with the consequence that people experience both these dimensions in their everyday life. In this framework, the bi-polar distinction between 'urban' and 'rural' has become less useful as an indicator. (Fortunati and Taipale, 2012, p34)

In effect, many can live an 'urban lifestyle' while living in the countryside.

The occupations of rural dwellers have also changed. No longer is there the emphasis on agricultural work, and many former farm-workers remain living in rural areas but commute to larger towns and cities for work (Gilligan, 2003). In some instances, work has also come to the countryside. These changes in population work profile also indicate a closing of differences. Any rural dwellers working in a city can, for part of the day at least, have access to its facilities, and they are likely to be just as highly educated or competent at using technology as any urban dweller. When they return home in the evening they might expect the same level of connectivity they experience at work, and bring their engagement with technology from their work into their social lives.

The factors which influence technology use in rural areas are usually considered to be outside local control and suggest that given the same access levels, patterns of use would be universal throughout the population. However, some writers would contend that there are other (internal) factors at work when one is considering communication patterns, as slightly different patterns of friendship and socialisation exist in rural and urban areas. Gilbert et al. (2010) analysed friendship patterns (via social media websites) of 4,000 users, split over urban and rural areas. They found that in comparison with their urban counterparts, rural users were slower to take on board social network software but once they become users they used the media more frequently. Rural users were found to have fewer online

friends and with contacts generally living close by. This represents a pattern of a small number of strong links, reflecting a tightly bonded community. Such tight local communities have the potential to exploit modern technologies, and Stern and Adams would contend that many rural residents are using Electronically Mediated Communications (EMCs) (specifically, the internet) to strengthen their bonds in that they learn about local activities and groups through the internet (Stern and Adams, 2010). They conclude that '... internet usage can play an important role in building social capital in rural communities, thus extending the systemic model of rural voluntary participation and community attachment' (p1389). This is supported by a later study which states that '… digital and network capital are powerful influences on civic partnership' (Stern, Adams and Boase, 2011).

The conflicting 'push' and 'pull' factors evident here produce a complex set of interactions when trying to determine urban and rural differences in technology use. The situation is further complicated in that much of the research is carried out using EMCs, meaning only those who have access are included. One exception is a mail survey of a rural population carried out in 2005 to examine modes of communication within core social networks (Stern, 2008). The results here showed that the most used mode of communication for these rural dwellers was the telephone (67%), followed by face-to-face communication (55%) and then email.

2.2 The mobile phone in everyday life

This section reviews research findings on the adoption and use of the mobile phone as a technological device. It is a topic which has received extensive attention by sociologists in that uptake has been both swift and universal. Common perception and popular media often express deterministic comments on 'how the mobile phone has changed us', however there has been considerable social shaping at play in the device achieving its current worldwide acceptance. I use the phases of domestication to guide a path through the literature on the subject, covering adoption, incorporation and conversion.

The focus of this thesis is the use of the mobile phone in everyday life, outside the formal worlds of work and education. When linked to technology, the term 'everyday life' becomes a contested expression and requires some clarification. Early technology studies focused mainly on shared, bulky items such as the television or the washing machine (for example: Ang, 1992; Schwartz-Cowan, 1999), and in examining everyday life they were able to confine their field of enquiry to interactions within the home. However, smaller, more individualised technologies such as the mobile phone require the inclusion of public as well as private places. In their 1996 work, Lie and Sørensen suggest that everyday life might be the 'social space which the individual citizen is able to oversee and manage' (Lie and Sørensen, 1996, p15). They then acknowledge that this is an incomplete definition as communications technologies give us global access, and bring us into places outside our personal control. Mackay provides a more comprehensive definition in his contribution to the classic cultural studies investigation of the Sony Walkman. He considers three ways that the term might be used: 'taken-for-granted routines, that which we repeat daily', 'productive consumption' by which we appropriate and manipulate consumer goods, and 'that characterized by small, local communities, with close and emotional ties, connectedness between people, caring, spontaneity, immediacy, participation and collaboration' (Mackay, 1997, p7). I take these three together in this thesis to provide a suitably broad spectrum to examine the changing

patterns of communication for both individuals and any local community group of which they are members.

2.2.1 Adoption: bringing the phone into 'the everyday'

Originally the marketing for mobile phones was targeted at business users, and it was this cohort who were the first adopters (Goggins, 2006). However, both media stories and anecdotal evidence of its usefulness in emergency situations created a common perception that the phone was a handy item to carry 'just in case', and many others purchased phones for safety and security reasons. Once they owned the phone, it was then easy for users to translate the concept of it as an insurance device into one which liberated them, and allowed them a freedom to travel to places they might not otherwise have ventured. Ling points out that the mobile phone here underwent a paradigm shift:

> In sum, safety and security have become a well-engrained part of our social image of the mobile telephone. This image is part of the way in which we have legitimised the device. It is used in our understanding of how we integrate, or perhaps domesticate, the telephone into everyday life situations. … We can trace [here] a shift in the social understanding of mobile communication. The technology has gone from being a symbolic prop for the rich to having a central, albeit often passive, role in the lives of many people. It is important to understand that the legitimations are social constructions. They are based on concrete situations such as the time your friend was stranded in a potentially dangerous situation and the mobile telephone came to the rescue. These events have been reformed into a broader understanding of the mobile phone as a type of umbilical cord. (Ling, 2004a, p48)

The example of using the phone for social rather than business interactions illustrates the strength of the consumers' role as innovators of technology: they did not change the form of the artefact, but turned about the manufacturers' vision for it. There are many examples of mobile phone owners using the device in unexpected ways to fit their lifestyle needs, and these are often where it is not used for direct communication, for example '… visual documentation of one's environment, … creation of special ringtones for the purpose of communicating

without paying, calling random numbers to expand one's circle of friends' (Fortunati, 2006).

Although there grew to be acceptable (non-business) reasons to have a mobile phone, some users also needed encouragement to purchase what was perceived as a highly technical device. In this decision, they were strongly influenced by their own personal social networks. Peers and friends who already owned a mobile phone were key in persuading new adopters. To an onlooker, the convenience of having a readily-available communication device, and the arguments for its use in times of crisis, were obvious; any hesitancy in adoption needed to be defended on the basis of cost, or by attempts to distance the user as being different or pretentious.

These early users were also important in passing on the knowledge of how to use the mobile phone and the associated knowledge required to become a subscriber. This included not only navigation of complex tariff systems, but also understanding of subscription models, and new concepts such as the use of SIM cards and roaming. There was no place here for the superiority which was displayed by technical experts in the development phases of other technologies[6], including the fixed line phone, and teaching and passing on an understanding of the instrument to friends meant that mobile phone use was set to be egalitarian rather than elitist. This is an enactment of the role of the 'warm expert' (Bakardjieva, 2005; Stewart, 2007) as described in section 2.1.4. It was very much in the interests of these early adopters to encourage others to adopt the phone. Not only did they see the advantages of being able to contact others who were 'on the move' (like

[6] Marvin describes how early electricians, for example, held on to their knowledge in an effort to distinguish themselves: 'Their efforts to invent themselves as an elite justified in commanding high social status and power focused on their technological literacy, or special symbolic skills as experts… They sought to define insiders and outsiders in electrical culture, to enforce standards for professional training and to arbitrate the use of technical language.' (Marvin, 1988, p61).

themselves), but they often had alternative, more personal, reasons. These early (non-business) adopters were often the subject of teasing in that being a user was a reflection of one's self-importance, needing to be in constant touch[7]. Bringing those ridiculing the device into the user community eased their own situation, and helped democratise the mobile phone as an everyday artefact. In this way mobile phone domestication was subject not to the mores of the household which it entered, but rather those of one's own social circle.

2.2.2 Mobile phone diffusion

The coming of the mobile phone to a mass market has happened very rapidly worldwide. If one were to evaluate diffusion using Rogers's classic model (as described in section 2.1.3), the mobile phone would display a very steep s-curve for cumulative adoption to saturation. The adopter distribution (Rogers's model of a standard bell-curve) would show the categories early adopter, early majority and late majority all adopting within such a short time frame they are almost indistinguishable, giving a curve with a very large steep central section and short tails. Although similar patterns of distribution are evident in many countries, the rate and reasons identified for successful diffusion and adoption are different. A number of writers have attempted to unpick the statistics in order to determine the factors influencing diffusion across countries from a macro-economic perspective.

In his 2008 report Kalba looks at the factors affecting adoption and diffusion of the mobile phone globally (Kalba, 2008). He ascertains a number of drivers including disposable income, legacy telephone services, demographics, adoption 'observability', technology development and entrepreneurial investment. Castells et al. also look at factors accounting for differences in penetration rates (Castells et al.,

[7] Common derogatory terms used were YUPPIE (young, upwardly-mobile professional) and LOMBARD (loads of money but a right dickhead).

2007). As Kalba, they consider Gross Domestic product (GDP) and existing fixed-line infrastructure but also include a wide range of other factors such as geography, industry, pricing and billing systems, technological standards and types of service, level of competition, government policy and socio-cultural factors. Considering world-wide figures gives a very complex picture and draws focus to the differential between the largely developed nations of the northern hemisphere and those in the south which in general have a poorer infrastructure and economic wealth. A more equitable comparison might be Gurber and Verboven's study which mainly looks at diffusion from the supply side, examining the influence of regulation and policy for countries in the EU (Gurber and Verboven, 2001).

The (possibly expected) finding from all of these research cases is of a strong positive relationship between high GDP and high level of mobile penetration. Kalba suggests that this is not a direct relationship as high income markets are not markedly ahead in adoption terms, but aligned with middle income markets, a finding which weakens the link between adoption and income (Kalba, 2008). Castells et al. also document the links with GDP and adoption and recognise that it is a complex relationship with internal national disparities such as countries with low GDP displaying high penetration in urban, but not rural, areas (Castells et al., 2007).

There are more ways to measure diffusion than just the metric of number of purchases made in the marketplace as used by most theorists (such as Rogers, 1995). For example, one could measure successful diffusion by the extent of use rather than the number of handsets bought. Kalba points this out:

> Adoption studies usually focus on penetration levels. Yet level of usage is also an aspect of adoption. It is one thing for consumers to adopt a technology and then rarely use it (or use it a great deal initially and then set it aside) and another to be regular, even heavy users. (Kalba, 2008, p 40)

This point can only be more fully explored through a micro-level analysis, inspecting individual consumption.

2.2.3 Differentials in adoption and diffusion – who are the users?

One of the greatest surprises in the spread and popularity of the mobile phone was its widespread adoption by adolescents. This happened in a very short time, as Ling points out in his study of Norwegian teenagers:

> … in 1997 almost no 13-year-olds reported having a device. In addition, ownership was quite low among those under 18 years of age. In 1997 significantly more boys than girls had mobile telephones. This situation had changed by 2001, when approximately 90% of the teens interviewed in a representative national sample owned a mobile telephone. The age differences had largely vanished, and, interestingly, the data shows that a significantly larger number of girls than boys had a mobile telephone. (Ling, 2004a, p84)

This pattern was repeated over a wide range of countries (Castells et al., 2007), and it was through their universal embracing of the technology that adolescents showed the adult population how the mobile phone could become an integral part of everyday life. Teenagers used the phone to coordinate their social lives and to gain independence with security (Haddon, 2004; Ling and Helmersen, 2000). They could control their own channel of communication, often for quasi-illicit or forbidden means, and yet retain the link to the connected relationships of home and family. They used it not only to keep in touch, but as a symbol of friendship – 'gifting' others with calls, texts, or simply inclusion in the listed numbers in their phonebook (Johnsen, 2003). They also accorded it cult status – attaching significance to the type of telephone owned, and creating their own fashion trends (Green, 2003; Skog, 2002)[8]. Parents, who often were footing the bills for such interactions, were tolerant in that it provided them with an 'electronic leash' by which their offspring could

[8] In particular, teenagers in Asian countries extended the fashion to decorating and displaying the phone and as a primary status icon (Okada, 2005). This is discussed further in section 2.2.7.

gain the emancipation they desired and yet be contactable and, they believed, safe (Ling and Yttri, 2005). These teenage pioneers are now, ten years later, adults who presumably have carried the familiarity and comfort of the mobile phone with them into their independent work and social lives.

Considering that women so successfully laid claim to the fixed line telephone as a cultural artefact, there is no reason to suppose that they would have difficulty in engaging with its mobile counterpart, and with many countries showing national penetration rates over 100%, one might assume that there is no gender differentiation in ownership. However, it is believed that women were slower to adopt the mobile phone than men[9]. We cannot be sure as to why this might be, but possibly women were put off, not by the technical aspects of the device, but rather by the fact that they didn't see its usefulness. Early purchases for non-business use were considered to be slightly self-indulgent[10] and women might have felt the need to justify ownership. As already stated, the original targeted phone user was a male business man and certainly in its early days, anyone who did not fit that profile was a reluctant user. Since phone use is often a public activity, any early adopter would have attracted a certain amount of attention and teasing that they were engaging in conspicuous consumption of an unnecessary product, a state which would deter many users (not only women) who did not identify with this image[11]. However, when phone adoption began to filter through to encompass more social rather than

[9] The point that women were later adopters is widely, but not fully agreed by researchers. Puro found similar figures for males and females as early users in Finland, a country which was one of the earliest and most extensive adopters of mobile phones (Puro, 2000).

[10] Early telephones were often described as 'boys' toys'.

[11] I have personal experience of this. I was an early adopter who often hid my phone in my handbag when out with my female friends and if it rang I explained its presence by the fact that I needed it for safety and in any case I had got it through a free offer by my car insurance company.

business users, it appears that men were the initial purchasers. Once established users themselves, they then often bought phones for the women in their lives:

> A striking finding in our research was a gendered pattern of acquisition of the mobile phone. While the male informants either got the mobile through their employer or bought one themselves, all the women received their first mobile as a present. It was given to them by their husbands, boyfriends, sisters, brothers, fathers or other family members. Often they got a used mobile, available because the giver had acquired a new one. Arguably, we observe a phenomenon that might be called a 'wife mobile' similar to the 'wife car'. (Sørensen, 2006, p52)

It was later claims of its convenience as a safety device which encouraged many women to label the artefact not as an indulgent plaything but as a useful aid to twentieth-century living, and commit to being users (Ling, 2004a). Of course, once ownership was established, the growth of fashions in handsets also established the phone as a commercial artefact attractive to many women.

As already mentioned in the context of mobile phone diffusion (section 2.2.2), there are more ways to measure phone use than simply ownership. There is also the possibility that male and female owners may differ in the extent and type of call they make. This is a difficult hypothesis to examine due to the extensive and intrusive nature of monitoring an individual's calls, and as such is beyond the scope of this thesis. It is also one which has had mixed reports from other studies (Castells et al., 2007; Green and Singleton, 2009; Lemish and Cohen, 2005). Some researchers find that the types of use familiar from fixed line analysis (chiefly instrumental calls made by men, intrinsic calls by women) are replicated through the mobile phone. Others report a levelling out of gendered differences in use. However, what appears to have happened is that equity has come about not because women are using the phone in the same manner as men, but rather that men are using the mobile phone primarily for social interaction, in a 'female' way (as BT wished- see section 2.1.6). Leamish and Cohen support this idea:

> The concrete everyday use of the mobile, as studied in our case, suggests that it may be located within the no (wo)man zone. That is, the device is stereotypically masculine in the sense of being a mechanical [sic] gadget, yet it is stereotypically feminine in that it is used mostly for networking. The mobile phone therefore, might be playing a role in the blurring of gender differences in the actual use of communications technologies, and not necessarily reinforcing existing social divisions. Supporting evidence comes from a recent cross-cultural study that suggests that the mobile is making men more chatty and communicative than they were without it . (Leamish and Cohen, 2005, p191).

One interesting outcome of this study is that men state that they carry the phone so they can contact others; women state it is so they can be reached. This would reflect the fact that:

> … the cellular telephone, because it lies in that twilight area between public and private, seems to be an extension of the public world when used by men, and an extension of the private world when used by women, That is, men use it to bring the public world into their private lives. Women tend to use it to take their family lives with them wherever they go. (Rakow and Navarro, 1993 , p155)

Research on the relative adoption of mobile phones in urban and rural areas is scanty. The government Office of Communications in the UK published a report in 2008 (OFCOM, 2008) which suggested a slightly higher adoption in urban areas (87% compared with 83% in rural areas), but generally this is not an aspect which has received much attention by researchers although relates directly to the period covered in this study. One might assume that service providers initially expanded their coverage in urban areas and so access to a good call reception for rural dwellers may have been an inhibitor to adoption, however there are inadequate statistics to establish any specific rural patterns.

2.2.4 Incorporation: performing 'the everyday'

The mobile phone has presented us with much more scope than was ever afforded by its fixed line counterpart. Not only does it provide a link to our friends and family, but if those people are also carrying a mobile, we can make that link at any time, and in any place. This ability to be in 'perpetual contact' means that we carry

our social circle with us, and we are able to contact them frequently. Licoppe describes this:

> … communications technologies, instead of being used (however unsuccessfully) to compensate for the absence of our close ones, are exploited to provide a continuous pattern of mediated interactions that combine into 'connected relationships', in which the boundaries between absence and presence eventually get blurred. (Licoppe, 2004, p135)

The reasons of safety and security, as already mentioned, are certainly part of the reason we wish to be close to the familiar at all times, but being in constant contact has its drawbacks too. Aakus refers to this as 'the dialectic alternative' between autonomy and connection:

> Human connection is propelled in part by the way people resolve the competing desires and expectations to be separate or to be together. To be separate invites liberty with the potential for isolation and alienation. To be connected invites solidarity and belongingness, but with the potential for loss of self and domination by the collective will. To some extent, there is an irreconcilable tension between these dialectic poles, and 'making it through the day' involves inventing and appropriating strategies and habits of thought to manage the shifting demands for autonomy and connection. (Aakus, 2003, p40)

Carrying a mobile phone means you can be accessed at any time, even though the possibility that it might disturb your current place and situation is a cause for disquiet to many users. It means that others can keep tabs on your movements (provided we tell the truth when they ask the habitual question 'Where are you?' which begins many mobile interactions). This gives the opportunity for others to monitor our movements, and intrudes in our most private moments. Rheingold refers to the 'always-on panopticon' when he considers the potential for the mobile phone to become a vehicle of surveillance[12] (Rheingold, 2002), and Green expresses

[12] Perhaps it should be panauricon!

how we both resist and embrace this in her aptly-named paper *Who's Watching Whom?:*

> Current research suggests that individuals can use their mobile devices to assist in their own surveillance by institutions, as well as resist it. At the same time, they also engage in routine monitoring of themselves and each other through those same technologies, and assume that others are self-regulating and accountable for their use of devices in both co-present and tele-present contexts. (Green, 2002, p43)

Being always accessible also means that work colleagues may have an expectation that one is available for work at any time. When allied to the rise of teleworking, another possibility afforded through EMCs, this might be seen to have serious repercussions on a work-home balance:

> Commuting to work, strictures against 'personal calls' at work, socialising during the weekends, and having a separate 'personal' or social life, are twentieth century concepts. These concepts reflect differentiation of the social meaning of places and locations – working with other employees at the office versus seeing family and friends at home, for instance. They also reflect differentiation of the social meaning of time – the 9 to 5 workday versus the weekend. But today, wireless technologies which help people cross space, time, activity and social networks, promise to bring us back to earlier times when the boundary between work and personal life was less distinct. (Gant and Kiesler, 2002, p121).

Despite these speculations, research has found that 'the mobile phone is not primarily a work extension device' (Wajcman et al., 2008, p648), and counter to some views that being in perpetual contact might put us under pressure, another study '[does] not uncover any evidence to support the claim that perpetual contact afforded by mobile phones has accelerated the pace of life beyond people's perceived capacity to cope comfortably' (Bittman et al., 2009, p686).

For most of us, our concern is how being contacted can disrupt the physical space of our present moment. Unlike with a fixed line phone, where the handset is usually located in a place affording relative privacy, an incoming call on a mobile phone can find us anywhere – in public or private space. We can also be surrounded by, and

perhaps even in conversation with others. Such situations require management to split our attention appropriately and within acceptable social customs.

An intruding call when we are in the company of others requires that we adopt a suitable strategy for handling not one, but two social interactions. We can choose to prioritise the distant and, with appropriate nods and facial expressions, leave our co-located conversation to concentrate on our phone caller. Alternatively, we can drop or dismiss our caller with a promise to 'call back soon'. However, in many situations this isn't easy, and we try to maintain both simultaneously. This requires what Ling refers to as a new 'social juxtaposition' (Ling, 2002). We try to manage both channels of communication – partly including the co-located with the distant. If the two parties know each other, this can be done with some indulgence. If they are strangers, the co-located must be informed of the intrusive nature of our interaction by grimaces and raising of eyes. Many researchers have made the link here with the approach of Erving Goffman and his metaphor of 'front stage' and 'back stage' actions in human communication (Goffman, 1959; Fortunati , 2005; Love and Kewley 2005; Cumiskey, 2005). The balancing acts that we perform between the co-located and the distant-present interlocutor can be delicate, but are usually short lived.

Being with others when a call comes can also cause a dilemma if the call content is not in keeping with the local environment, for instance when we are in a convivial social setting and receive a call from an angry or disturbed family friend. The ability to switch situational perspective and mix the context of the virtual (incoming call) with the local (physical surroundings or activity) in terms of changing thought streams has been achieved with some practice. As Relieu states ' ... special skills are needed if we are to embed remotely produced messages into proximal interactions. These messages have the ability to affect the trajectory of the local interaction' (Relieu, 2009, p225). Often communicants use an opening interchange which establishes not only the location but also the activity of the called person in order to

ascertain if a sustained conversation is possible (Weilenmann, 2003), and the ability to talk may sometimes require extracting oneself to a more private space, creating a physical as well as metaphorical separation from the co-located.

Another problem with taking a mobile call in a public space is in how it intrudes on the life space of others, in that we are speaking to an absent person within the hearing of those around us. This creates a 'forced eavesdropping' for any strangers who may be close, which may cause them embarrassment. In particular, when this happens on public transport, we are often in a fixed seat and within eye contact with the speaker, and the fact of being present to one half of a (private) conversation can make an onlooker very uncomfortable. There are ways to deal with this, such as the 'civil inattention' suggested by Goffman (where we avert our eyes and ignore the 'intruder'). Murtagh describes how we manage such situations through 'non vocal complaint work':

> … through the introduction of the mobile phone, phone use behaviour is made available to others thus providing a whole host of inferences to treat particular phone behaviours as accountable, acceptable, intrusive, etc. Identifying these matters within a specific context is dependent on members' common sense knowledge of the peculiar features of the mobile phone itself and their knowledge of the settings within which usage takes place. (Murtagh, 2002, p90)

When 'common sense' cannot deal with the situation, then public policy may take over. Okabe and Ito describe how a social accommodation has occurred on the Japanese train system that spoken mobile communication is not acceptable, but text use on mobile devices is. This has been given a formal ratification by public announcements regarding appropriate use, which suggest people refrain from taking or making mobile calls (Okabe and Ito, 2005). The cultural norms of acceptable behaviour differ, however, and in the Philippines, conversation on public transport is considered acceptable:

> Despite the congestion in public transport in Manila, conversations, either real or mobile, are generally accepted since passengers recognise that they have private, if only transient, territories within the public sphere. (Paragas, 2005, p126)

Early users were often considered pretentious (by non-users) when they used a mobile phone in any public space, as if taking a call was a form of display, using the public place as 'performative space' (Sussex Technology Group, 2001). Today, with full penetration in the population, we are all now more understanding of how one has no control over their location when they receive a call. Many people deal with an incoming call by leaving the shared space and trying to make a 'virtual bubble', commandeering a private space within the public sphere, where the call can be taken without disturbance. In certain situations, such as a meeting, even doing this may be considered rude, as constantly leaving the room can also cause a disturbance as the co-located may feel that full attention should be on the task at hand. In some public areas, any use of the mobile phone is seen to be inappropriate. Apart from the obvious 'quiet spaces' such as cinemas, libraries and churches, use in a restaurant is often frowned upon[13]. There are heavy normative expectations of behaviour in restaurants, and the more up-market the restaurant, the stronger is the transgression viewed (Ling, 1997).

The etiquette around when and where we might use a mobile phone is constantly changing. Today mobile devices and applications are being used in public health and education, causing the legitimate and necessary use in most public places. We are also becoming more tolerant of others' public calls (Norman and Bennett, 2014). Despite this, many people still feel a dual allegiance as they 'may respond negatively to seemingly irresponsible mobile phone users, yet, as mobile phone users ourselves, we may promote protecting the unregulated use of wireless

[13] Some institutions, such as libraries instigate their own policy about setting aside a specific area where calls are permitted. This can to a certain extent ostracise the mobile user, similar to the actions being taken in many countries to combat smoking in public places.

technology in public spaces' (Cumiskey, 2005). Ling gives many examples of this in his 2012 work, summarising with the quote: 'We Are Either Abused or Spoiled by It – Difficult to Say' (Ling, 2012).

2.2.5 SMS: adopting a new medium

The early mobile phone not only introduced personal telephony via voice calls, but presented a new medium for sending messages – the Short Message System (SMS), commonly known as 'texting'. While apparently a less rich form of communication, texting turned out to have its own advantages advantages over voice calls. It is:

> … cheap and convenient … inconspicuous … allows us to be expressive even in situations when other forms of communication are not appropriate. .. It allows us to co-ordinate everyday activities, to send endearments, get quick answers to questions, to keep one another up to date concerning the large and small events in our lives. It is used to fill up the odd free moments of the day. (Ling, 2004a, p147)

This new media for communication started to give us new affordances in how we might keep in touch.

The popularity of texting was accelerated by its widespread adoption by adolescents, and much of the early research on the topic is based around their use (Grinter and Eldridge, 2001; Ling, 2001a; Schiano et al., 2002; Kasesniemi and Rautiainen, 2002). The fixed price per (160character) message meant that teenagers, whose spend on calls is limited, could budget their communications. They could also make text 'calls' relatively unseen, or in secret, maintaining the privacy from adult eyes (and ears), which they might crave.

The use of text messages gradually spread, and in ways, texting provided the 'killer application' for mobile phones which email had provided for the internet[14]. In fact, for some users, texting comprises practically all their phone use, and the tariff model they choose is selected with this in mind. Despite the high figures on usage, there is a belief that SMS adoption is somewhat uneven, and there is a possibility that some people rarely use text while others more than make up for this deficit. In their 2002 research Crabtree et al. found that 47% of mobile users had never sent a text message (Crabtree, Nathan and Roberts, 2003), and evidence from Norwegian research in the same year shows that those under twenty (and in particular females) make up the bulk of the texters (Ling, 2004a). However, over time it is possible that texting has become more universal among mobile phone users in general, and the massive increase in the number of texts sent in recent years might suggest that other cohorts have also adopted it as an important communications form. This is borne out by reports where, for example in 2006, it was found that 'on a typical day, 51% of over-60s use their texting function' (Carphone Warehouse, 2006, p17).

A text message is truly personal – it goes directly to the person of interest, without anyone else even knowing it has been sent. In this way, text messages do not intrude on the public space in the way in which voice calls do. They also put less pressure on the receiver. Not only is the arrival of a text relatively unobtrusive, there is not the same urgency to reply, and if we are busy or in company, we can leave the reading of the message to a more convenient time (Matsuda, 2006). We can

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[14] In an early paper on internet applications, one of the originators of ARPANET (precursor to the internet), J.C.R. Licklider enumerated the usefulness of email, using the same arguments we use today to appraise texting: 'One of the advantages of the message systems over letter mail was that, in an ARPANET message, one could write tersely and type imperfectly, even to an older person in a superior position and even to a person one did not know very well, and the recipient took no offense. … Among the advantages of the network message services over the telephone were the fact that one could proceed immediately to the point without having to engage in small talk first, that the message service produced a preservable record, and that the sender and receiver did not have to be available at the same time.' (Licklider and Vezza, 1978)

also store a message and refer to it again, a particularly useful feature if it is a reminder, or perhaps direction details, which we don't want to commit to memory. The asynchronous aspect of text use has made it particularly useful in the early stages of romantic relationships, where one can spend time composing an appropriate message and then send it to an admired other, who can then take time to think about and compose a response (Ling and Yttri, 2002). This has been an important use for teenagers, as one does not risk the rejection which might ensue from a face-to-face contact, as in Goffman's terms we can 'arrange face' (Ling, 2004a).

Text messages are, by their very nature, short. They were originally designed to be 160 characters in length, and considerable efforts are often adopted in order to keep one's message within this limit. As an input device, the telephone keyboard is limited, so keeping the message short is a pragmatic decision for the sender. Because of these size constraints, we usually don't bother with greetings or what in conversation might be termed 'small talk', but are more pointed in what we wish to say. Our task here is greatly aided by the development and acceptance of a specific abbreviated language, a 'telegraph writing style' (Ling, 2004a, p157), which has become a badge of teenage use. This terseness of text communications make them particularly useful for certain applications – sending a reminder, asking a short question, passing a brief comment on what's happening. The decision whether to use voice or text on our mobiles (assuming cost is not the dominant issue) is often influenced by the time we wish to spend on getting that message across (Rettie, 2003).

At times we use a text as if the recipient was with us, and we simply wish to make an aside to them about what is happening in our lives. Using it in this way reinforces the concept of perpetual contact and regular text messages sent in this way mean our nearest and dearest can be keep closely informed of our current state. Relationships based on texting consist of many short links, as opposed to the less

frequent and more leisurely conversation which we might desire (and protocol might require) on a voice call. More recent developments have seen this feature developed to a public audience (the 'Twitter phenomenon').

There is also a commercial aspect to text messaging when it is used to provide updates such as weather, sports results and news, with premium rate costs. These 'text alerts' have created somewhat of a nuisance for many phone owners, who have received unsolicited messages, or signed up for a service which forces them to receive more texts then they desire (or wish to pay for)[15]. Of course, others subscribe to such alerts and find them a useful addition to their work or leisure activities.

2.2.6 Changing communication practices

One of the main ways in which we have used the mobile phone, and especially the texting facility, is to organise and plan our lives (Ling and Campbell, 2009). Parents trying to juggle work and family life are one group who find it particularly useful to exchange small, but important, messages for the coordination of activities (Ling, 2002). For these, last-minute changes in schedule and pick-ups (of children or groceries) form the basis of most of their calls and texts, and can even justify ownership of the phone (Frissen, 2000; Ling, 2006; Wajcman et al., 2008).

Mobiles are also useful in arranging face-to-face meetings. Not only can we use them to call or text and set a time to meet, but we can also use them to change any arrangement when the exigencies of life intrude on our fulfilling the appointment. Being late is, in most cultures, a breach of social propriety, and we have a complex etiquette system in place which determines the acceptability (or otherwise) of being late for a meeting. Now the mobile phone affords us a way to bend these social rules

[15] The Irish government (for one) have instigated a code of practice to regulate unsolicited texting and have publicised this service through television advertising.

somewhat, by contacting our friend while en route and informing them in advance of our lateness, enabling a re-scheduling of the time and/or place to meet (Ling and Yttri, 2002; Ling, 2004a). Such mid-course adjustments can occur possibly more than once, and can sometimes re-direct travel which has already begun. In an extreme case, two persons can be travelling towards each other and make iterative arrangements while physically zoning in on each other. In fact, using the phone for such 'hyperco-ordination' while on the move in this way can be said to 'soften time' in that it relaxes fixed and precise arrangements to allow a more fluid interpretation of when we meet.

It can be seen that using the mobile phone in such ways calls into question major issues in our relationship with time. While we might acknowledge the mobile phone being used to *save* time when we use it instrumentally to replace face-to-face meetings or reduce travel, Ling would suggest that, in certain circumstances, the use of the mobile phone can *replace* time as a defining factor in our lives:

> As the mobile phone becomes ubiquitous, it competes with and it supplements time-based social coordination. In essence, we begin to move away from the parallel interpretation of a common metering system, i.e. time, and replace that with the possibility for direct contact between those who are coordinating their interactions. Instead of relying on a mediating system, the mobile phone allows for direct contact that is in many cases more interactive and more flexible than time-based coordination. (Ling, 2004a, p58)

We are therefore no longer bound to clock-based time systems, but can coordinate our meetings to suit our present situation and circumstances[16]. This flexibility is

[16] Interestingly, Ling refers to this as a *direct* rather than a *mediated* system, in that we do not use the intermediary of the international timing system. Yet we recognise the phone as a mediator in itself in the experience of human communication, as opposed to the more direct form of F2F interaction. Geser agrees with Ling: 'a kind of *disintermediation* takes place in the sense that the mediating contribution of supra-individual institutions is no longer required for realizing and coordinating informal interactions, because such informal interactions can be maintained by direct interpersonal communication' (Geser 2005, p 32).

also reflected in how we use the mobile phone to arrange spontaneous meetings – calling a friend if we are in their area, with the possibility of meeting face-to-face. Using the phone to organise such last minute meetings creates 'just-in-time' forms of socialising (Haddon, 2004). This is an instance where we make an extra communication which leads in itself to an extra face-to-face encounter. This enables multiple increases of our personal interactions, providing the 'mutual enhancement of mobile phone calls and face-to-face socialising' (Licoppe and Heurtin, 2001, p106).

In today's stressed society we are very aware of wasting time, usually waiting or travelling periods, when we are inactive with respect to work or social life (the folds of life). This is often the time we use to catch up with our social network. Use of the phone in an in-between period such as this gives us a diversion, almost an amusement, and is often termed 'playing with the phone', but it can also be a constructive session in kin-keeping. Fortunati refers to this as a thickening of time:

> Time, it has been said, has been stretched out. But in what sense? In the sense that, seeing that its temporal duration cannot be modified, its thickness has been expanded. The mobile, much more than the fixed phone, makes it possible to speak and do various actions at the same time as it is being used: walking, driving and so on. Doing more than one thing at a time allows you to live a double or triple life … The mobile in particular forces people to ask themselves about the compactness of what they are doing. It forces them to single out the pauses in their actions, the pores, the cracks in time, so as to get hold of and to make communicative use of them. (Fortunati, 2002, p517)

There is almost the closing of a circle here, with transport at the vortex. It is travel which can either send us distant or bring us together; it is during our travel time that we have vacant time slots to fill; it is in this period that we inform the person we are to meet of our progress or catch up with those we have missed along our busy paths. The relationship between time and place is interwoven in that each feeds the gap left by the other. When traversing space, we fill time. Castells has termed this the *space of flows*:

> The space of flows is the material organisation of simultaneous social interaction at a distance by networking communication, with the technological support of telecommunication, interactive communication systems, and fast transportation technologies. … The structure and meaning of the space of flows are not related to any place, but to the relationships constructed in and around the network processing the specific flows of communication. (Castells et al., 2007, p171)

The issue not only of time, but also of place comes up here. Castells's description of place, meaning the physical space we occupy, is as a node in a wireless network: '… places do exist, but they exist as points of convergence in communications networks created and recreated by peoples' purposes' (p172). In effect, we are not in a single place; rather we are everywhere, at the end of our telecommunications link. In fact, research has found that people make many of their mobile phone calls from places such as their home or workplace, places where the mobility (in terms of being able to carry or move with) aspect of the device is irrelevant (Grinter and Eldridge, 2001; Fortunati, 2001; Ling and Haddon, 2003). In Castells's terms, 'Places are subsumed into the space of flows, thus losing their meaning in the space of places' (Castells et al., 2007, p174).

2.2.7 Conversion: we're all users now

There is no doubt that our mobile phones have become an integral part of our everyday life, and have gained meaning to us as individuals. How we decorate and display the phone is a reflection of how we present ourselves to the world, and the identity which we adopt.

> Consumption is the articulation of a sense of identity. Our identity is made up by our consumption of goods – and their consumption and display constitutes our expression of taste. So display – to ourselves and to others – is largely for symbolic significance, indicating our membership of a particular culture. (Mackay, 1997, p4)

When we keep the phone on open display we are stating not only that we are an owner, but what type of owner we are. If it is an old or cheap model, perhaps we do not value the current fashion trends; if it is a sophisticated multi-functional model, anyone else who values this and sees it will hold us in esteem. What might be

considered a 'cool' phone is a socially constructed phenomena, and like any other consumer artefact, mobile phone producers advertise their handsets as stylish in order to attract consumers to their own brands (Katz and Sugiyama, 2005).

This facet of the mobile phone as an artefact has been exploited by manufacturers to attract the fashion-aware public to their products, and for many the telephone must not only be functional but also in keeping with current trends – small, or of a particular style (e.g. clamshell) or decorated appropriately. Fashion, of course, changes over time and this has very much been reflected in the size of handsets. In the early days of mobile technology smaller phones were desirable in that they denoted a more sophisticate technology. The evolution of smartphones able to browse the internet changed this and screen resolution (with a consequentially larger handset size) became the factor of prestige. In being aware of the fashion in mobile phones consumers are using it as a way to express something about themselves too, in effect that they are aware of and in keeping with current trends. This imbues an extra meaning to the value we attribute to the physical device itself.

Small size and sleek shape were the cachet of early (expensive) models, although through time even cheaper handsets were produced in a compact design. This meant that, while early adopters were in fashion simply by virtue of owning a small, neat device, when this became the preserve of all consumers new ways were needed to extend the definition of a fashionable phone. Teenagers in particular often employ a variety of ways to decorate their personal handsets. This could be through the use of stickers on the hardware and popular images and distinctive ringtones on the software (Hjorth, 2005). In this way even an old or cheap phone may be made to display the cultural icons of a group. While phone ownership puts us in fashion in that we are doing the same as others, decoration is here being used as an expression of being different, through owning a unique handset. The facility for decoration has also been responded to by phone producers, who market the accoutrements necessary to transform and personalise their handsets. In true social shaping, '…

there is a reciprocal process of negotiated meanings between an industry seeking to frame the technology and the public that responds to, adopts, and modifies further the technology' (Katz, 2006, p74).

Irrespective of its role as a fashion item, the mobile phone is an artefact of individual ownership, and one of which many users have become particularly fond. Personal attachment to the phone seems most keen during the teenage years, when one feels inclusion in a social circle to be of prime import, and the mobile phone becomes an outward expression of this, almost a 'body part' (Oksman and Rautiainen, 2003). Vincent has researched the emotional attachment of users to their phones, and many of those she interviewed spoke of 'loving' their phones, and experiencing panic or feeling lost when it was unavailable to them (Vincent, 2005). This is perhaps not so much through their attachment to the handset as a piece of hardware (which is relatively cheap and easy to replace), as the potential of what it carries –the second articulation of our ownership, connection to others. This aspect is inscribed in the contents of the phonebook, which convey the gifted numbers of all of our contacts, and possibly the evidence of their affection through any stored text messages. Vanden Abeele and Roe express this as a form of 'symbolic proximity':

> We understand symbolic proximity as peoples' experience of belongingness to their psychological neighbourhood, which is enabled in our current society by the communication technologies' continuous potential for social interaction. It is important to note that symbolic proximity extends itself beyond the concepts of immediate interaction and imminent connectedness. While these functions of communication technologies certainly contribute to a sense of symbolic proximity, it is especially the continuous potential for interaction that is important to people. (Vanden Abeele and Roe, 2008, p4)

Fortunati puts this nicely when she states that 'We have become snails in that we carry our relational house on our backs' (Fortunati, 2005, p217).

The constant presence of our social circle in the form of connected presence through our phones seems to have become an essential talisman while travelling, or even

living, in the twenty-first century. We consider the phone to have given us the freedom to go where we wish without feeling unsafe or alone, and it could be said to act as an emotional security blanket when we step outside our comfort zone. However, in those spare moments which we fill by communicating on our mobile phone we are also closing off any co-present with whom we might otherwise make conversation. Comforting as this might be, if we turn to the familiar within our phonebook at every unfamiliar turn, we are not likely to expand our horizons and embrace new experiences. Brought to an extreme conclusion, we could possibly receive all our socialisation needs through our existing contacts only. Ling poses the questions raised:

> Will the mobile telephone result in a flowering of the social sphere, or in the retreat to a balkanised social clique? Will the mobile telephone result in a society where the threshold for contact is lower, thus giving us access to wider circles of friends, or will it intensify our circle of friends and provide us with a stronger internal solidarity? Will the mobile telephone turn us into members of a type of walled community where we interact only with a limited circle and routinely exclude others? Will the device lead to more 'postmodern' interaction in which we carry out – or are exposed to – a series of what might be seen as semi-completed banal interactions without broader context? (Ling, 2004a, p189)

Others have also identified this problem. Geser has written of the 'increasing the pervasiveness of primary, particularistic social bonds'(Geser, 2005, p25) and Habuchi has termed the phenomena 'telecocooning' (Habuchi, 2005). While the contents of our phonebook might be said to define our social circle, it is commonly agreed that we must ensure that it does not bound it.

2.2.8 Extending use: The smartphone and the mobile internet

The rise and adoption of the mobile phone was very rapid, creating a supporting industry in its wake. In most countries the number of service providers expanded as the market became more profitable, 'mobile phone shops' appeared on the high street and for a period the device dominated advertising hoardings. In effect, the mobile phone became integrated into everyday life and was on its way to becoming

a ‘mundane’ technology (Dourish, 2010). When the penetration in most countries reached saturation point the search was on by handset manufacturers and network providers for a new device (or a significantly enhanced device) to lure new customers. This came in 2007-8 with the introduction of the Apple iPhone and its competitor models based on the Android operating system. These ‘smartphones’ incorporated a touch-sensitive screen and virtual keyboard and also enabled to use of small programs (apps), which foresaw a convergence in computer and phone technologies. Today almost all mobile phones sold are of the smartphone variety.

The smartphone extended the functionality of the mobile phone and together with small-sized computing devices (tablet computers) has bridged the gap between communications and computer technologies. In particular the provision of access to what became known as the ‘Mobile Internet’ (MI) has expanded the range of communications options for the user. Voice Over Internet Protocol (VOIP) calls enable the incorporation of ‘live’ images and the non-voice option of SMS is joined by Instant Messaging (IM). Using the MI also gives access to social networks systems (SNS), in particular the very popular Facebook and Twitter software. Consumers now have a range of choices on how to communicate through their smartphone.

Although new services may mean an increase in sales for Mobile Network Operators (MNOs), it also could potentially mean reduction in the revenues from established services if they are replaced by the MI. A number of researchers have focused on this question and examined the potential of new offerings to replace existing means of communication (for example Fortunati and Taipale, 2014;Gerpott, Thomas & Weichart, 2014).

The rise of the MI has been slower than anticipated and it is only in 2015 that it is showing a sharp rise and in some countries becoming the predominate method of access. Early studies posed that users saw accessing the internet from their mobile

phones simply as an extension (ie a transportable version) of their PC-based use. In a set of interviews carried out in 2008, Nielsen and Fjuk find that it is mainly iphone users using the MI and then only when their PC is out of reach (Nielsen and Fjuk, 2010). They conclude that it was necessary to ' look for new killer applications or more elegant user interfaces that will create more value and propel MI usage'. However, this seems slow to come to pass as de Reuver et al five years later report that 'consumers will only adopt mobile services if these strongly resemble the services they already use on the fixed Internet' (de Reuver et al, 2013). The implication in both of these papers is that it is the end user who is reticent about extended MI use, a point which is supported by Fortunati and Taipale who in 2014 examine 'advanced' use of mobile phones, which they define as 'smartness of use' rather than the 'smartness' of the actual device(Fortunati and Taipale, 2014). They conclude that 'convergence of mobile phones in Europe is taking place in a very limited way' and state that those who do adopt MI as a 'tool of social labour' are getting little real value in non-social interaction. Napoli and Obar extend this point and pose that those who *only* use the MI are experiencing diminished internet access due to the physical limitations of their devices and provision of new (scaled-down) versions of software designed to work on these (Napoli and Obar, 2014). They describe those who use the MI (in particular 'mobile natives' who have little or no experience of the full PC versions of internet access) are an 'emerging internet underclass'.

The range of communications options now open to end users through the MI provides a complex landscape of choice. This has led to discussion on the 'ecology' of communications media and the need to consider all types of contextual, demographic, social and political factors in examining use. Some researchers examine specific influences such as place-related contexts (Karikoski and Soikkeli, 2013) or 'length of tenure' with their provider (Gerpott, 2015). However these simplistic relationships are not able to capture the complexity of choice and others state that it is necessary to adopt a research approach based on the affordances of

mobile media. For example, Schrock considers the 'portability, availability, locatability and multimediality affordances' offered by smartphones and mobile devices (Schrock, 2015). Helles further moves this view forward by considering the user as a 'mobile terminus for mediated communicative interaction across the various contexts of daily life'(Helles, 2013). He takes a high level view, mapping affordances with respect to the synchronous/asynchronous nature of the message and the audience size as shown in Figure 6.

	Asynchronomous	Synchronous
One-to-one	SMS, MMS, email	Voice calls/chat, video chat, instant messenger
One-to-many	Web 1.0, download repositories, e-books	Broadcast radio and TV
Many-to-many	Web 2.0, wiki, blog, social network services	Online chatrooms, multi-way chat (e.g. Facebook)

Figure 6. Communicative affordances of mobile broadband devices (after Helles, 2013)

While this provides an overview of affordances, it is a somewhat 2-dimensional approach in that it doesn't consider the contextual influences on use. Madianou attempts to add these when she writes of 'how users treat media as integrated environments of affordances', giving smartphones the designation of *polymedia*. (Madianou, 2014).

This all leads to the question: Are smartphones and the MI displacing traditional communication network provisions of voice calling and SMS? Research so far would suggest this is not the case (Karikoski and Luukkainen, 2011; Gerpott et al, 2014; Lee and Leung, 2008; Helles, 2013) but instead it acts to supplement existing services and incorporate new ones. Where use of the MI is considered to have an effect is in diminishing the 'telecocooning' predictions as described in 2.2.7. A number of authors (for example, Campbell, 2015; Konayashi et al, 2015); Ling et al., 2014; Kyobashi and Boase, 2014) have revisited this topic in light of smartphone developments. They generally agree that the extended communication facility of MI

through of smartphones is being used to reinforce strong ties, but not at the expense of diverse, weak or new links.

Introduction of the smartphone has moved mobile phone technology to a new platform, but it is still the essential aspect of 'perpetual contact' which has evoked most change in our everyday patterns of life. The smartphone enables us extend our range of methods for communication and has reinvigorated the marketplace for phones, but the evidence of social change presented by early studies still holds true.

2.3 Community

The issue of community is one which has for long been at the core of sociological debate. Early philosophical analysis of the relationship between technology and society in the face of industrialisation concluded that in embracing the machinery of the factory we also changed our patterns of social organisation. Although no such radical changes are evident today, the rise of ICTs is also bringing to the fore questions on the tension between the collective and the individual. Some say the use of personal and single-use technologies bring us away from shared time with others, eclipsing face-to-face meetings and threatening the place of local community groups in the social milieu. This is considered to be a threat to social capital, which is itself considered a valuable contributor to quality of life and underlying strong civic engagement.

In this section I look at the theories around local community and how it was traditionally envisaged. I describe how the proliferation of personal communication technologies have brought about the rise of what is termed the 'networked individual', a human who can realise many of his or her social needs through mediated communication. This has caused a questioning of the remaining import of face-to-face communication and local community groups, with a consequent loss of social capital and the positive energy they are considered to contribute to the quality of life.

2.3.1 Theorising community

The role of community in our society is often considered within the wider question of the maintenance of a 'civil society'. Described as a third place, existing between the family and the state, the social institutions of civil society, such as collective co-operatives and voluntary organisations (our normal definition of community groups), may be seen as a place where an individual might debate and express their concern for the polity (Seligman, 1992). These ideas are the basis of civic republicanism, based on Aristotle's view of the principles of freedom or

voluntarism, and our capacity for self-government. Exercising our rights and responsibilities to society in this way '…acknowledge[s] the multi-faceted nature of citizenship as a philosophy and practice that values the mutually compatible goals of liberty, equality and fraternity (or community)' (Taskforce, 2007b, p3). These philosophies came under attack in the 19th century, not least by Marx, who saw voluntary organisations as being an opportunity for the capitalist class to express dominance under a veneer of philanthropism. Interest has now turned to defining citizenship as a set of rights held by individuals to ensure that all have equal representation and freedom of expression. Today many of these rights are enshrined in law and we have a formal endorsement of the individual's opportunities to exercise influence and play their part in a democratic society. However, we have still not solved the problems of society, and inequalities, disenchantment and social disturbances persist. What we do have, however, is a new diagnosis.

Maintaining the solidarity of a single group of people without the negative aspects bred by exclusion can only come about by an emphasis on free speech and widespread communications and understanding. ICTs are providing us with new means of such communication, but they are often applied to maintain our *personal* social networks rather than towards any collective good. A good example of this is the virtual walled communities as described at the end of the last section. Here we have the nub of the story: the 'impulse to sociability' as discussed by Simmel versus the individualism seen to be arising by use of mediated personal communication. The continuing persistence of such ideas has struck a chord today and many would posit that we are becoming more focused on the 'me' at the expense of the 'us'. This has in some cases manifest itself in attempts at social engineering a return to older forms of community.

Community meetings are the stage where civic engagement might be played out. One of the earliest theorists analysing community was Ferdinand Tönnies. Writing in 1887, he distinguished two types of human associations: *gemeinschaft*, intimate,

face-to-face relationships, based on bonds of kinship and tradition, and *gesellschaft*, impersonal, contractual and rule-based, which occurred in groups based on self-interest and which was characterised by weaker social ties. The latter were seen by him to be a negative emerging trend associated with urban capitalism, where individuals chiefly interact with others in order to attain their own ends, rather than consider the common good. As can be seen from Kivisto's interpretation of these differences in Figure 7, gesellschaft was very much associated with individualism, a trait which was presumed to be the community form indicative of the emerging world order (Kivisto, 1998).

Characteristic	Gemeinschaft	Gesellschaft
View of the individual	Collective; tied to the group or community	Autonomous; individualism
Social relations	Familiar; intimate	Impersonal
Social differentiations	Low	High
Key institutions	Family	State and economy
Geographic locale	Village	City
Social Control	Custom; religion	Law; contract

Figure 7. Gemeinschaft versus Gesellschaft (Kivisto, 1998, p92)

Tönnies originally saw the move from gemeinschaft to gesellschaft as an inevitable evolutionary progress towards industrialisation and saw this change in negative terms with respect to its influence on the common good (Tönnies, [1887], 1965). He linked this movement to two types of intentionality acting in people: *wesenwille*, a natural will based on habits and shared beliefs, and *kurwille*, based on rationality and choice. The inference is that the rise of kurwille produces an allied deterioration of the social environment and the breakdown of the positively-considered entity we call community. However, later critics saw that the two states gemeinschaft and gesellschaft might co-exist, and instead of this being solely a time-based trend, it might be seen also as spatially distinguished one, with rural areas holding on to gemeinschaft and urban areas moving to the more alienating experience of gesellschaft. Rural life was seen to be backward and traditional, less progressive, but

with the concept of community firmly in place. Urban life was considered modern, but absent of community within this traditional definition.

Around the same time that Tönnies was developing his ideas of community in an increasingly industrialized world, Alexis deTocqueville was writing on the allied topic of individualism. He coined the term when comparing the form of democracy evolving in the United States in the mid-19th century with life in post-revolutionary France (deTocqueville, [1835], 1994). He noted that not everyone in the US acted in ways which were in the interests of the community, and did not believe that this was due to selfish motives, but rather a more considered (and less negative) approach to society as a whole:

> Selfishness is a passionate and exaggerated love of self which leads a man to connect everything with himself and to prefer himself to everything in the world. Individualism is a mature and calm feeling, which disposes each member of the community to sever himself from the mass of his fellows and to draw apart with his family and friends, so that after he has thus formed a little circle of his own. (deTocqueville, [1835] 1994, p98)

Interestingly, this definition of individualism can be very aptly applied today within the critiques of modern technology use and the formation of self-contained social networks. Our mobile phones enable us to circumscribe our own 'little circle' in ways which are themselves subject to censure as not being in the public good, as in the arguments on telecocooning mentioned in section 2.2.7.

It is Émile Durkheim whose ideas on the topic of social cohesion have probably had most influence in sociological circles. While embracing the writings of deTocqueville and Tönnies, he proposed a counter-analysis to theirs: he saw the division of labour manifest in an industrialized society as offering a more organic form of social solidarity (Durkheim, [1893] 1984), in that he believed the more complex structures involved in the specialization of jobs required an evolved interdependency which had not been necessary in earlier, more self-reliant, work

environments. Durkheim's theories of the human state are also evident in his work on suicide (Durkheim, [1897] 1951) where he puts his analysis in terms of the social and asocial aspects of the human, specifically the balance between fulfilling individual needs and meeting the obligations of society. In this he explores the claims upon the individual as an autonomous being and his or her obligations in supporting others through socialization. Conflicts arise when the balance of interest is with the individual (egotism) or with the obligations imposed by society resting too heavily (altruism). Durkheim did not advocate a return to older forms of community as a solution to these problems (as Tönnies may have proposed) but believed that a new form of social solidarity might itself evolve.

In the twenty-first century the human is seen primarily as an individual with rights and needs and, in western society at least, personal choice predominates. The roles prescribed by our place and family of birth no longer dictate how we live and each person has the choices to describe their own life path. This is commonly viewed as a form of freedom:

> What the idea of 'individualization' carries is the emancipation of the individual from the ascribed, inherited and inborn determination of his or her social character: a departure rightly seen as a most conspicuous and seminal feature of the modern condition … Modernity replaces the *determination* of social standing with a compulsive and obligatory *self* -determination. (Bauman, 2001, p144)

In terms of civic republicanism this move to individualization is also evident in our links with state bodies; and contemporary institutions expect us to live in a more autonomous state than in the past:

> … we live in an age in which the social order of the national state, class, ethnicity and the traditional family is in decline. The ethic of individual self-fulfilment and achievement is the most powerful current in modern society (Beck and Beck-Gernsheim, 2002 p22)

The historical arguments on the 'tension between me and us' (Kivisto, 1998) are even more pertinent today where individualism is seen to triumph and where it

appears 'individualization is here to stay' (Bauman, 2001, p50). For many, this is seen as a very negative development for the polity at large. Bauman himself suggests this when he quotes deTocqueville '... the individual is the citizen's worst enemy and … individualization spells trouble for citizenship and citizenship politics' (Bauman, 2002, p xviii).

Although the focus may now be on the singular being, each person still needs to make links with others in order to operate a fully-functioning life. The change is that we no longer view these interactions through structures such as family and place, but rather as sets of self-woven ties, self-chosen 'little circles'. The theories of deTocqueville et al., originally drawn up to understand a society changing in the face of mass industrialization, rising urbanization and shifting of world power bases, are now being applied to examine our shift to a new paradigm – that of a networked society where individuals are nodes interlinked by the ties provided by modern EMCs.

2.3.2 'Eclipsing' community

There is a certain mythology that old-style community is a positive thing, but such small closely-knit collectives were not always harmonious. They could also be closed in their thinking and stifling for the individual, particularly for one who had difficulty in conforming to local expectations and mores. In any case, the idea that we have lost, or are losing, the positive aspects of community through the development of modernity is of concern to many. This is often expressed in the 'eclipse of community' thesis espoused by Stein (1960). Changes in our lifestyles are thought to mitigate against the expression of community in its more traditional form, including a decrease in the influence of place, increased individuality and the centralisation of social structures. This finds a number of manifestations: in a time of mass communication and a globalised economy, an *eclipse of locality* is taking place,

and the significance of a local place in defining one's social identity is diminishing[17] ; people today are presented with more opportunities to create their own identity independent of that determined by those with whom they live, leading to an *eclipse of communality;* the centralisation of political and economic power in urban areas gives an *eclipse of local autonomy*. A consequence of eclipse theories has been the rise of the communitarian movement at the end of the twentieth century. This is dedicated to rebuilding collective solidarities as a reaction against increasing individualism in society.

Current ideas on community have been largely influenced by the popularity and widespread acceptance of the ideas of Robert Putnam, who writes with communitarian principles. In particular, his widely-publicised book, *Bowling Alone: the Collapse and Revival of American Community*, (Putnam, 2000) documents the decline of civic participation in the United States in the latter half of the twentieth century and this has brought into question the strength and continued success of local communities in western society. Putnam surmises that our loyalty and attachment to local organisations is waning:

> Large groups with local chapters, long histories, multiple objectives and diverse constituencies are being replaced by more evanescent, single-purpose organisations, smaller groups that reflect the fluidity of our lives by allowing us to bond easily but to break our attachments with equivalent ease. (Putnam, 2000, p184)

Putnam provides a tome of qualitative and quantitative support for his theories, attributing the 'blame' for this decline on a number of factors in our current lifestyle. Despite all of this, community groups do persist, and many of these are of essence

[17] Critics of the eclipse theory would argue that the opposite often applies, and one might retain their connection and identification with a local place despite being geographically distant from it. A good example of this would be the Irish and Italian emigrants to the United States who go to live in downtown New York or Chicago among those from their local village, and retain the identifiers of music, dance, politics and even language of their homeland.

face-to-face, as they are focused on joint local action or recreation, for example drama groups, music classes, self-help support groups, neighbourhood watch or local political activities. The local sports clubs examined in this thesis are a prime example.

2.3.3 New forms of community and a Networked Society

While acknowledging the evidence presented by Putnam, others are keen to point out that community is not declining – it is simply changing form. Indeed, the term today is applied in a much wider way than to simply define the people of a specific geographical area. It is also used to indicate those of a defined social group (gay community), or those who share their work (the academic community), religion (the Muslim community), or lifestyle interests (the arts community). In fact, it is applied to any group who have a shared characteristic or activity, irrespective of their location. The ultimate extension of this today is the inclusion of groups who are defined by a shared interest but who only interact through on-line fora, such as the internet or other EMC. vanDijk distinguishes these communities as virtual and organic:

> *Virtual* communities are associations of people not tied to time, place and physical or material circumstances, other than those of the people and media enabling them. They are created in electronic environments with the aid of mediated communications. *Organic* communities are bound to time, place and natural environments because they depend on the physical contact of human organisms together shaping a 'social body' that is called a community. So they are based on face-to-face communication. (vanDijk, 2006, p166)

Virtual communities[18] are characterised as being very much the choice of the individual, rather than being prescribed for them by the convenience of place. They

[18] When used in juxtaposition with the word 'real', the term 'virtual' might imply a lesser, unreal type of community experience. Writers have used various other words to overcome this assumption, for instance 'communities without propinquity' (Webber, 1964) although 'virtual' is the most widely accepted expression. In this thesis, I use the term *on-line* to refer

are also enabled totally by new technologies, giving ICTs a primary role in the creation of community. Taking part in them neatly overturns the eclipse theories as, despite lack of shared locality, members are expressing their commonality by participating together on-line. Such virtual communities offer many advantages. They are volitional, and therefore more meaningful to the individual; they are secure and accessible; their organisation is usually egalitarian and inclusive; they are easy to enter and exit, and they offer the opportunity for an individual to adopt a changing persona. As Barney states, they are ' ...the perfect solution to the 'problem' of community in the contemporary context, by maximising autonomy and choice without wholly sacrificing the possibility of communal attachment, and vice versa' (Barney, 2004, p160).

The flexibility which on-line community offers to the individual means that the groups formed have different characteristics to their place-based equivalents. The networks created are looser and less permanent, as members join and leave at will, dependent on their interests and life stages. Such groups experience 'thin' relationships:

> For some, community means 'thick' relationships of mutual moral obligation, bound by strong, enduring, multiplex ties and practices that define social roles, norms and identity, and are not easily broken. For others 'community' can feature relatively 'thin' relationships comprised of voluntary, revocable, dynamic ties based on shared individual interests and needs. (Barney, 2004, p156)

Local (off-line) community groups, usually of the 'thick' type, can experience problems when members expect to apply the (more flexible) norms of commitment which they practice on-line. An ensuing transience of membership in an off-line group brings changes and challenges, transforming their nature, size and

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to virtual community, and the terms *off-line*, *local* and *face-to-face* to refer to what vanDijk calls organic communities.

persistence. They may also struggle to retain the stability and cohesiveness they previously enjoyed.

The existence and growth of on-line communities are regarded by some to pose a threat to the survival of local communities. In the late 1990s Putnam posed the question most starkly: 'Will computer-mediated communication 'crowd out' face-to-face ties?'(Putnam, 2000, p179). Evidence, however, would suggest that participation in on-line communities complements and even stimulates participation in off-line equivalents. As Steve Woolgar found in his study *Virtual Society?:*

> Although we are sometimes led to believe that new technologies offer an alternative set of practices which displace old ones, it frequently turns out that the new practices take place alongside the old ones … There is evidence that some technologies intended to create new virtual systems of social organisation actually reinforce non-virtual practices. (Woolgar, 1999, p6)

This opinion is further supported by an online survey of over 39,000 visitors to the National Geographic website, which found that people's interaction on-line supplements their face-to-face communication, without increasing or decreasing it:

> … heavy internet use is associated with increased participation in voluntary organisations and politics. Further support for this is the positive association between offline and online participation in organisation and politics … our evidence suggest that the internet is becoming normalised as it is incorporated into the routine practices of everyday life. (Wellman et al., 2001, p1)

The idea that we can link to anyone in the globe through virtual communities gives rise to the concept of the *Networked Society*. It is Manuel Castells who is credited with establishing this network metaphor. He describes contemporary society:

> Networks constitute the new social morphology of our societies, and the diffusion of networking logic substantially modifies the operation and outcomes in processes of production, experience, power and culture. While the networking form of social organization has existed in other times and spaces, the new information technology

> paradigm provides the material basis for its pervasive expansion throughout the entire social structure. (Castells, 1995, p 469)

Barney makes this metaphor explicit when he looks at not only networked technology but also networked economy, politics and identity (Barney, 2004). vanDijk also includes networked law, social structures, culture and psychology in his analysis (vanDijk, 2006). These authors are stating, in effect, that everything today can be described as networked. While Castells suggests that the development of ICTs is the starting point for this evolution, Barney believes they totally underwrite it:

> The phrase 'networked society' applies to societies that exhibit two fundamental characteristics. The first is the presence in those societies of sophisticated - almost exclusively digital - technologies of networked communication management/distribution, technologies which form the basic infrastructure mediating an increasing array of social, political and economic structures … the second ... is the reproduction and institutionalization throughout (and between) those societies of networks as the basic form of human organisation and relationship across a wide range of social political and economic configurations and associations. (Barney, 2004, p25)

There have been some interesting attempts to interrelate online and offline interaction. For example, the website meetup.com[19] provides a forum for face-to-face groups to post information, and a search facility for users to find a community group which they can join. This is one example which counters the idea that the two forms are in direct competition.

2.3.4 Social Capital

Closely linked to discourse on community is the study of social capital. This might be thought of as a synergy created by the trust, reciprocity and exchange mechanisms inherent in any social network, of which individual members benefit.

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[19] www.meetup.com (accessed 6th July 2013)

The term has been defined and used in the fields of economics and sociology for some time (Coleman, 1990 ; Bourdieu and Wacquant, 1992; Portes, 1998; Hall, 1999). It has its sociological roots in the work of Durkheim, Tönnies and deTocqueville on the relationship of the individual and the community, and later applied by others to an examination of the characteristics of group interaction. The term has also been widely adopted by economists, who have created definitions which place social capital alongside physical and human capital as a source and catalyst in human interactions. There has been a revival of interest in recent years, mainly due to the influences of the work of Robert Putnam (Putnam, 2000). Today the existence of strong social capital is often invoked as a metric for the 'success' of community.

The concept of social capital is one first described by Pierre Bourdieu, when he challenged the historical interpretation of the term 'capital' and defined it rather as a form of power which can be manifested not only through its monetary expression, but also in the forms of cultural capital (*what* we might know) and of social capital (*who* we might know) (Bourdieu, 1986). Bourdieu saw social capital as developed and maintained by a series of exchanges, and our quotient being measured by the size of our social circle and the levels of sharing within these:

> … the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition – or in other words, to membership of a group – which provides each of its members with the backing of the collectively-owned capital, a 'credential' which entitles them to credit, in the various senses of the word. (Bourdieu, 1986, p51)

The power here rests not with the individual but with their status as group members, although it is created, maintained and kept active through the action of individuals. Bourdieu and Wacquant expressed social capital as the 'the sum of resources, actual or virtual, that accrue to an individual by virtue of possessing a durable network of more or less institutionalised relationships of mutual acquaintance and recognition' (Bourdieu and Wacquant, 1992, p119). This could be

evidenced in how joining an elitist club (which requires the recommendation of existing members in order to be admitted) can confer to the individual the benefits of support and backing of their peers and possible respect from others, or how on hearing a 'family name' one might make assumptions on the class or status of an individual. The focus of Bourdieu's work was on the benefits to the individual due to participation in groups and sociability circles created for this purpose.

James Coleman has written widely on the topic of social capital, taking a systematic approach when he expresses the concept in terms of rational actors operating in a networked environment (Coleman, 1990). He emphasises three key components of social capital in his work: the existence of information sharing; the expectations on members and any associated obligations this might imply; and the norms and sanctions extant in membership. He considers that:

> Social independence and systemic functioning arise from the fact that actors have interest in events that are fully or partially under the control of other actors. The result of the…exchanges and unilateral transfers of control actors engage in is the formation of social relationships. (Coleman, 1990, p151).

The formation of social capital comes about when the relations between the actors in a networked environment change in ways that facilitate action. Coleman defines social capital as intangible, being embodied in the links between the human nodes, and created with exchanges between the persons comprising the network. These exchanges can be seen as non fungible 'credit slips' through which the rational actors of the network nodes maintain obligations and expectations. These may be imposed (for instance by a power relationship or by the norms of a collective), or created by specific coming together (for example in mutual clubs). The level of overall social capital is dependent on the level of trustworthiness of the social environment. Using empirical evidence of closed groups such as Jewish diamond-dealers in New York, he showed how any member who did not live up to the expected norms of trust could be excluded from future interactions by the local, business and ethnic community in which they lived and practiced their trade.

Coleman provides a very functionalist view of social capital as being inherent in rational actors who create and maintain obligations amongst themselves. Again he defines it as a group property: 'As an attribute of the social structure in which it is embedded, social capital is not the private property of any of the persons who benefit from it' (Coleman, 1990, p315). Coleman's ideas on social capital would suggest that it might thrive among those who were close and closed, from similar backgrounds and with shared life experiences and norms, living in proximity. Taken to a logical extreme, this pictures a society composed of balkanized groups, with little cross-over and sharing of information and resources, not a particularly healthy social order.

Mark Granovetter has also looked at social organisation, in particular in his work *The Strength of Weak Ties*, (Granovetter, 1973). Here he describes the fact that groups with close relations exhibit 'strong ties' which may create rich social capital internally and create bonding. However we underestimate the value of 'weak ties', links which we have outside the core group. He uses the example of finding a job, an instance when it is the reach of one's contacts which is important (their weak ties) rather than the strength of the closed circle. For a fully functioning society we need both types.

The most currently influential commentator on social capital is Robert Putnam who fed into a consciousness of the rise of individualism when his *Bowling Alone* work was published (Putnam, 2000). Such is its influence, his work is explored more fully in section 2.3.5.

There have been various interpretations of what specifically identifies social capital, but from a meta-analysis of the literature, Pigg and Crank have identified five key elements commonly found in its definition. These are: networks; resources for

action; reciprocity transactions; bounded solidarity and enforceable trust (Pigg and Crank, 2004)[20]. Social capital is generally acknowledged to be a property of a group, although created, maintained and kept active through the action of individuals. It has two complementary sources: *civic engagement*, the degree to which we become involved in community affairs, and *social contact*, how we as individuals work our engagement with others through interpersonal communication patterns, including visits, encounters, phone calls and social events (Quan-Haase and Wellman, 2004). Although much of this thesis is concerned with the former definition (civic engagement), in that it examines members' contributions within face-to-face community groups, the very use of the mobile phone exhibits the latter.

There are also two recognised forms of social capital, based on its effects: *bonding* social capital which suffices to keep a group closely connected, and *bridging* social

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[20] With such a variety of definitions and different cultural contexts, it is difficult tocreate a framework by which to study social capital. However, a number of attempts have been made. In each of the models established, the characteristics of trust and reciprocity are seen as key. They are the reason behind why exchange patterns take place, with the exchange patterns themselves forming the 'glue' which bonds the network together. Onyx and Bullen set out to develop an empirically grounded definition of the term, drawing on a number of resources (especially Putnam) to define the essential elements common to researchers (Onyx and Bullen, 2000). From a review of the literature and extensive discussions, they drew up 68 identifier items, and then through surveying reduced their list to eight key factors: participation in local community; being proactive in a social context; having feelings of trust and safety; having neighbourhood connections; having family and friends connection; being tolerant of diversity; feeling that their life is of value; having work connections. Their major output was a questionnaire which might be used to test and quantify social capital.

The Office for National Statistics in the UK have also been working on a definition of social capital for use across government (Harper and Kelly, 2003). They looked at existing frameworks for measurement used in UK surveys, and created a survey matrix with five dimensions: social participation; civic participation; social networks and social support; reciprocity and trust; views of local area. They also established factors which would indicate if the dimension is present, and developed a series of questions which were tested in focus groups from different ages, ethnic groups and localities. They then carried out 400 structured interviews based on the revised questions. Their final product is a 20 minute questionnaire to be used in national household surveys.

capital, which forges links across disparate groups (Ling, 2004a)[21]. One might make correspondence between these types and the 'strong' and 'weak' (or 'thick' and 'thin') ties theories of social networks (Granovetter, 1973). The two functions are not mutually exclusive, they may be thought of as a continuum rather than a dichotomy. Norris proposes a typology of the societal functions of online communities based on ideology and background, as seen in Figure 8. The assumption here is that bonding occurs online mainly where the social homogeneity and ideological homogeneity of members coincide, leading to a deepening of links among those with shared backgrounds and beliefs. In cases where participants come from more diverse backgrounds, bridging occurs (Norris, 2004). This is not dissimilar to what might happen in offline communities.

	Social homogeneity	Social heterogeneity
Ideological homogeneity	BONDING	MIXED
Ideological heterogeneity	MIXED	BRIDGING

Figure 8. Typology of the social function of groups. Norris (2004)

Portes analyses a number of definitions of social capital which have been used through time, but concludes that it is today applied to 'the ability of actors to secure benefits by virtue of membership in social networks or other social structures'(Portes,1998, p6). He shares with Coleman the analysis of sources as being consummatory, as in the fulfilling of social obligations (imposed), and instrumental, as based on reciprocity and exchange, but also identifies a bounded solidarity which occurs with identification of a common cause.

[21] Putnam refers to these forms of social capital in more prosaic terms: he defines bonding social capital acting as 'sociological superglue' and bridging social capital as 'sociological WD-40' (Putnam,2000, p23).

Economists are also interested in the application of social capital as an exploitable power in the creation and maintenance of the capitalist model. It is used in this context to examine the levels of trust and reciprocity inherent in how 'whom you know' might be leveraged, and sit alongside physical capital and human capital as a resource. The World Bank has defined the term as '…institutions, relationships and norms that shape the quality and quantity of a society's social interactions' (Smith, 2000-2009). However, the system of creation, exchange, and dissolution of social capital is more tenuous than its partner 'capitals'. In general, the sense of comfort created in an environment of high social capital is seen as a positive contributor to quality of life, and has been the subject of at least one major European study (Ling, 2004b).

While many of the studies carried out on social capital agree on certain overlapping factors, the intangible nature of the concept, and the variety of definitions of its nature would suggest that creating a universally acceptable metric within the research community is unlikely. The concept and its interpretations are also subject to criticism, for example by Vincente Navarro who would contend that in engaging with social capital debates we are seeing the possibility of solving many of the world's ills through its manipulation (Navarro, 2002). He sees it as having an implicit acceptance of capitalism and inhibits us from looking at the fact that it might be capitalism which is contributing to some of our problems. Despite criticism, social capital is still being widely used in published studies and has become somewhat of a hallmark in assessing the ills of society in popular perception. Its use within Irish policy documents and in research work on the mobile phone validates its inclusion in this thesis.

2.3.5 Robert Putnam and Bowling Alone

It is Robert Putnam's work on social capital which is most often quoted today and has been the basis for perspective and policy on the issue in recent years. As a highly respected academic and author of 12 books, Robert Putnam is a very high

profile communitarian. His best known work in the area of civic engagement is *Bowling Alone: the Collapse and Revival of American Community*, written in 2000. Putnam here observes that many social structures (such as bowling leagues) no longer attract members and that Americans are no longer joining clubs and organisations in the numbers they had done in the post WWII period. He amasses an extensive volume of data to support his claims, and then goes on to analyse why this might be, what is the impact of it on American society in general, and what action must be taken to correct the problem he has diagnosed. He makes persuasive arguments that there is a decline in social capital[22] and quantifies the contributions of various factors to this as: pressures of time and money, 10%; suburbanisation, commuting and urban sprawl, 10%; electronic entertainment, 25%; generational change, 50%.

While achieving public interest and recognition for his writings, Putnam is not without his critics. Fischer agrees with much of what Putnam states in what he refers to as his 'Whither America?' study, but takes issue with some contradictory explanations and suggests that public interaction may not be exactly disappearing but rather changing in form (Fischer, 2005). More relevantly, he challenges Putnam's definition of social capital, seeing it as a number of attributes gathered together which are unlinked, and having unlinked and individual explanations. He believes an analysis of the distinctive bonding and bridging types of social capital might give a clearer picture of contemporary American society.

Although much emphasis has been placed on Putnam's work as the major empirical study of the field, it is not accepted that this 'civic decline' is a global factor. In his study of social capital in Britain, Hall's findings are contrary to those of Putnam (Hall, 1999). He observes that voluntary organisation membership has seen a

[22] Putnam's definition of social capital is '…connections among individuals – social networks and the norms of reciprocity and trustworthiness that arise from them' (Putnam, 2000, p19).

positive growth in Britain in the past 50 years, and a number of new organisations have been formed. He also reports charitable endeavour to be 'vibrant and extensive', and informal sociability as measured through time-budget studies to have risen. Yet, the same patterns that Putnam offers as his reasons for declining participation are also present in Britain. In terms of the 'electronic entertainment' factor which Putnam offers, the British are, like the Americans, watching more television, but in their case it seems to be at the expense of listening to radio rather than at the expense of socialising outside the home. Hall attributes the maintenance of a high level of social capital in Britain to investment in education, changes in class structures and government policies which have invested in the development of the voluntary sector and its involvement in the delivery of social services[23]. Vincente Navarro supports Hall's view and writes that American and European versions of communitarianism differ in how they view the role of the state in public affairs (Navarro, 2002).

The one clear thing about Putnam's *Bowling Alone* is how seriously others have taken it. He has acted as advisor to three US presidents (Obama, Clinton and Bush Jr.), three British prime ministers (Blair, Brown and Cameron), Lybian leader Gadaffi, Irish Taoiseach Aherne and French president Sarkozy. He has founded the Saguaro Seminar, which has the mission statement of undertaking 'analysis of building social capital in a changing environment'[24] and which has provided a forum to instigate programmes to show how the floundering social capital he has described might be revived. This has also provided the material for his follow-up book, *Better Together: Restoring American Community* (Putnam and Feldstein, 2003), a description of case studies where re-invigoration of community spirit has ensued.

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[23] Note the article in the Sunday Observer, 6th February 2005, 'Millions sign up for service', http://www.guardian.co.uk/uk/2005/feb/06/politics.society (accessed 26th July 2013) where then prime minister Gordon Brown states 'Wanted: a nation of helping hands'.

[24] http://www.hks.harvard.edu/programs/saguaro/ accessed 7th July 2013.

2.3.6 ICTs and Social Capital

The use of ICTs has been used as an argument for both the feeding and the diminishing of community and social capital, as already mentioned. These arguments are essentialised in an early study where Kraut et al. refer to the 'Internet paradox' – the fact that when using a piece of technology to communicate we are actually reducing our social involvement with those co-present (Kraut et al., 1998). Putnam also argues that since individuals have a limited amount of time, using technology takes away from their community contribution: '… watching things (especially electronic screens) occupies more and more of our time, while doing things (especially with other people) occupies less and less' (Putnam, 2000, p245).Whether this is reducing our overall contribution to community (and social capital) is a contested point, dependent on how we might view the valence of on-line vis-à-vis off-line networks. However, it is a widely accepted and well-publicised viewpoint.

At the core of this argument is the question of what exactly we are using technology for. Most of the research to date has been focused on use of the internet, and there is no doubt that when it is used as a communication and information sharing tool, it can be a valuable source of interaction which might feed all the definitions of community contribution. Access to the MI through smartphones and other connected mobile devices broadens the space and range of situations in which we can experience this.

Barry Wellman's research specifically links the social affordances provided by good computer networks to an enhancement of social networks, and disputes Putnam's definition of civic participation as being a measure of physical (face-to-face) involvement only (Wellman, 2001). To him, computer communications form social interactions just as relevant as those taking place in physical place. Wellman expands these ideas to propose a new model of social interaction. Just as transport

improvements enabled our social links to no longer be confined to the neighbourhood, he believes EMCs enabled a further move to individual place-independent interactions (door-to-door became place-to-place became person-to-person). He then redefines community to include all these links in a form of 'glocalized' loosely-bound network (Wellman, 2001).

There have been a number of published works which specifically examine the links between social capital and technology, including one major European project - 'Social Capital, Quality of Life and Information Society Technologies (SOCQUIT)' (Ling, 2004b). This report analysed socio-economic data in order to provide recommendations to business, R&D and policy stakeholders, and also developed decision support software (DSS) which can be used to examine the extensive related empirical data gathered from population surveys throughout the EU. Their findings indicate that the use of ICTs strengthen and supplement social interaction in ways that feed social capital. When used appropriately, this can improve quality of life. This work is extensive, making rigorous efforts to define both social capital and quality of life. It also delves into the complexities of cross-cultural data analysis and multiple effects of ICT use. Carrying a number of caveats, its overall conclusion is positive in recommending that ICTs support social capital development. It has certainly not been given the same credibility as Putnam's work and its findings have not been as widely disseminated.

Barry Wellman and colleagues have done a number of studies in 'Netville', a suburb of Toronto which was constructed in the 1990s with fast, always-on internet connection at a period when lower, dial-up connections were the norm. This proved a model case study in that they had the opportunity to interview all residents and, as the telephone company was unable to connect every household to the high-speed network, they had an opportunity to compare 'wired' and 'non-wired' Netville residents. They have found an unusually high level of social interaction and

participation among those who are part of the network, a direct counter to propositions that community interaction is reduced by ICT use:

> In comparison to non-wired residents of the same suburb, more neighbours are known and chatted with, and they are more geographically dispersed around the suburb. Not only did the internet support neighbouring, it also facilitated discussion and mobilisation around local issues. (Hampton and Wellman, 2003)

A number of studies have examined the types of social capital (bridging or bonding) which are impacted by use of technology. In another experimental internet project, the Blacksburg Electronic Village, Kavanaugh has found that community leaders and participants use EMCs to both strengthen their bonds with each other and extend their involvement with other groups, thus enhancing both bonding and bridging types of networking (Kavanaugh, 1999). In contrast, Norris examines the effects on a variety of different groups, and finds that using online sites and discussion groups has a mixed effect for community groups (sports clubs), and has little to contribute to either bonding or bridging functions (Norris, 2004). Pigg and Crank decompose EMC use by function (to communicate or to inform), and find that using ICTs for communication strengthens bonding forms of social capital, while using them for information sharing builds new links and enhances bridging social capital (Pigg and Crank, 2004).

The use of technology has more obvious application to intra-group use rather than inter-group. As stated in an Irish report on the policy implications of social capital:

> New and existing information and communications technology has the potential to increase the connection between various communities and individuals. However, they do not offer a panacea. Such media are more likely to strengthen social capital to the extent that they build on existing patterns of social contact and acquaintance. Virtual community cannot simply create real community; nor can it substitute entirely for it. (NESF, 2003)

In an attempt to relate civic engagement with technology use, a number of studies have examined the rates of participation in community groups and the

corresponding use of the internet by members (Wellman et al., 2001; Dutta-Bergman, 2005). These suggest that those with internet access, and in particular frequent users, are more likely to be involved in off-line community. This was backed up in another study which found that members of neighbourhood councils who have email access are more 'central players' (Weare, Loges and Oztas, 2005). These results are difficult to interpret. Heavy internet users might be those who have the time, money and education to realise the benefits of technology, and any of these factors might also be indicators of high community participation. On the other hand, it may be that being an active member draws one to being a heavy user of communications technologies.

While technology has, of course, proved beneficial in the management of groups, as it has in any administration role[25], there may not be the same impetus and rationale to employ it in a voluntary organisation as there is in a for-profit establishment. In a review of surveys of ICT use in community organisations, Denison and Johanson found that, although community groups used the internet extensively, their use was somewhat stymied by lack of resources, software tools, support and training (Denison and Johanson, 2007). Also missing was the ability of groups to take a strategic view of the benefits of ICTs to their organisation, something which might only be exploited by access to trusted, independent and costly expertise. Successful strategies might encompass the building of both strong and weak ties, strengthening both the bonding and bridging aspects of social capital.

Despite all these positive associations between ICTs and social engagement, there is another side to the story. Due to age, low income, lack of education or remote location, many people do not have access to computers, fast broadband networks or the resources to use their mobile phones in an unlimited manner. These are often

[25] The use of ICTs for community objectives is recognised in the emergence of 'Community Informatics' as a field of practice and study.

the same people who may be marginalised in society, and who might be most in need of the support mechanisms provided by local community groups, and their exclusion means that they are also closed off to the potential of social capital creation.

2.3.7 Mobile phone use in the community

Although most of the research on technology and community to date has focused on internet use, the mobile phone is also of course used by members of voluntary groups as an integral part of their everyday lives. Just as they might contact friends about personal and social affairs, they use their mobile phones to talk and text about their community interactions and the MI to share events and information through social network sites. Being a communications tool which is convenient, direct and individualised makes it ideal for communication with an active and disparate group of people. As an additional communications tool, it serves to increase the overall number and frequency of links between members.

As described in section 2.2, the mobile phone is mainly used for short interactions, texts or brief calls, and having a large number of such frequent short links enables the experience of 'perpetual presence', staying in constant touch and remaining current with each other's location and actions. Although smartphones now offer us the opportunity for all types of computer-related work and play through the MI, over 90% of what we do on a mobile phone is still interpersonal interaction (Ling, 2015). However, the value of mediated links such as these are questionable. Lee et al. compare the role of internet and face-to-face interaction in their survey of 700 users and find:

> … use of the internet for interpersonal communication is not the same as offline face-to-face communication in enhancing quality of life. Online communication has an adverse effect on people's perceived quality of life. (Lee, Leung, Lo, Xiong and Wu, 2011)

While online communication might create closeness, it does not feed the more expressive and deeper relationships built through face-to-face interactions (or through extended speech calls). In a community of place this is not a problem, as members meet quite frequently and have ample opportunity to indulge in more intimate friendships.

One of the main uses of the mobile phone within community groups is to set up meetings and coordinate arrangements, often at short notice. The potential of having a device at hand to arrange face-to-face meetings is described by Larsen et al. as having 'network capital'. They define this as:

> … the capacity to engender and sustain social relations with people who are not necessarily proximate and which generates emotional, financial and practical benefit. It seems particularly crucial to study how the relational possession of this capital is crucial for connecting people, that is, to produce 'social capital'. (Larsen, Urry and Axhausen 2008, p656)

If all members of a group are in possession of a mobile phone it builds the capacity of each individual to contribute and the social capital of the group as a whole. Being in perpetual contact can also create a sense of belonging. Ling describes how we can use the mobile phone to construct this and engender a 'group identity':

> We have episodes in our past that we collectively work into a narrative of how the group came together and how it functions … We develop group cohesion by discussing and elaborating these elements into a single narrative. It is here that the communicative practices of eth group become important. The mobile phone, along with many other forms of mediation, provides us with a channel through which we construct these narrative identities. (Ling, 2015)

Where traditional telephone services are limited as a medium is in the types of social network that they can maintain. In Putnam's words, '… the telephone is used to maintain personal relationships now severed by space. One does not meet new friends on the telephone (quote Mayer)' (Putnam, 2000, p168). In other words, the telephone (in Putnam's case, the fixed line) can act as a *bonding* but not a *bridging*

tool for social engagement, as we use it to contact only those whom we know already (our own virtual walled communities as described in 2.2.7). Now having MI access through mobile phones can give us new opportunities and some authors suggest that using smartphones to access social networks can also enable bridging capital:

> While these services [social network sites] can serve in maintaining bonding social capital, research has shown that they are particularly useful for sustaining weak ties because they help reduce the time and monetary cost of maintaining relationships with a relatively large number of acquaintances. (Chan, 2013)

Chan is here saying that using social network sites on the MI is a shorthand way of staying in touch with the weak ties of one's social circle. Ellison et al. also contribute to this point when they find that through joining locally-based communities of interest on Facebook users can develop feelings of well-being and inclusion and even develop offline links, in effect, bridging capital (Ellison et al.,2007)

The quality of social capital developed through social networks is questioned by Stefanone et al. who required participants in their study to ask their Facebook 'friends' for help in a task – a positive response reflecting the type of act which typifies strong social capital (Stefanone et al., 2012). Almost 80% of 'friends' did not respond, displaying a distinct difference to the type of support one might expect when social capital is high. Hofer and Aubert also found limited development of social capital in their study of Twitter (Hofer and Aubert, 2013). The found that the greater the number of followers a Twitter user has, the greater the potential they have for bridging capital, although having a very large number of followers can create a psychological distance with these. It seems that the 'social capital' generated in the case of Facebook and Twitter is certainly not as strong as the exchange networks defined by Bourdieu and Coleman.

A dramatic example of using the mobile phone to access beyond our known circles is when it is used in the organisation of political action. In this sense it is used

almost as a broadcast tool. In the Philippines, the mobile phone has been credited with ousting President Estrada in 2001 by its us as an essential tool to draw the population to protest, utilising the phone as a 'tool of the public sphere' (Gordon, 2006). Termed *swarming*, the power of congregating people in this way is quite unique. It uses the concept of a 'telephone tree' where everyone receiving the message passes it to all the numbers in the phone book of their handset. It has also notably been used to mobilise mass action against the WTO discussions in Seattle and Gothenburg, and to gather protesters in Tehran and in the Occupy movement. Ling observes that there are three essential factors necessary for the organisation of such 'spontaneous' meetings: a common ideology, a triggering event and a common and easily communicated strategy (Ling, 2004a). The last factor is particularly key, as protest actions are often factionalised by extensive discussion and indecision, and use of text messages in this way is often a snap decision. Swarming can be considered as a form of ad hoc community creation in that it gathers and focuses a large number of people to a common cause, although its effects are of course transitory.

Although somewhat successful in rallying supporters to a cause in the short term, the role of the mobile phone in enhancing civic engagement in general is a contested issue. Campbell and Kwak base a study of mobile phone use around Putnam's work and his supposition that the privatisation of leisure time and electronic media have caused a decline in civic and community activities. They find this to be true for the mobile in certain circumstances. Using the phone for recreational purposes detracts from social engagement, but using it for information gathering does not: 'both mobile and internet technologies lower the threshold for communication which … offers significant social capital benefits when used for informational purposes' (Campbell and Kwak, 2010).

There have been a number of specific attempts to use texting on mobile phones to create or support local community groups. Farnham and Keyanai set up their own

group texting system which enabled SMS users to join a closed group and simply send a message to all members simultaneously[26] (Farnham and Keyani, 2006). It was considered very successful by those who participated, a socially-active group of close friends. They later turned this into a commercial concern, where members could join through a website by invitation only, forming a type of 'gated' text community. Sillence and Baber experimented using group texts as a way to create community interaction among supporters of various teams during the 2004 World Cup competition (Sillence and Baber, 2004). Messages on the progress of matches and fortunes of their adopted team rallied support from participants and they reported an increased sense of cohesion with their co-supporters. In a work-related example, a system has been developed as part of a UK 'Digital Care' project to facilitate the monitoring of former psychiatric patients who are developing independent living skills. Text messages on the location or status (e.g. running late) of clients are displayed on an office PC where they are available for all social workers to view. If the text was sent to any one worker, they would then have to inform all their co-workers of its content (Cheverst et al., 2003). Horstmanshof looked at SMS as a way to successfully provide connection and community to her first year college students, and discovered that it was a comfortable and accessible means of communication for this cohort (Horstmanshof, 2004).

There have also been a number of initiatives to create smartphone software to promote civic engagement. These can take the form of an information portal (e.g. *Virtual Town Square, ACTion in Alexandria),* or a smartphone app such as *Civinity* or *Local News Chatter*). In an apposite example, Han et al. describe the creation of two such apps, one to record local history and another on timebanking (the creation of a 'help exchange' among neighbours). They found that both of these 'leverage affordances (i.e. increased mobility, immediacy and social presence) of mobile

[26] This is offered as a standard on mobile networks in some countries, but appears not to be available through the service providers used in this instance. (This is a US study).

technology with respect to community identity, participation and awareness and social support networks' (Han et al, 2014).

Ubiquitous use of the mobile phone is generally seen as evidence of a connected population, abundant social capital, and of a progressive society[27]. The premise is that, if mobiles are widespread, then social capital can blossom, which will stimulate social and economic growth in general[28]. Goodman's study revealing the dearth of mobile phones and low evidence of social capital in Poland (in 2003) recommends that government policies should '… consider the mobile phone as a means for delivering connectivity and as a means for supporting the growth of vital social capital' (Goodman, 2003, p2). In the same way, Sinah's study covers a number of case studies in Asia and Africa which '…illustrate how mobiles can be leveraged to generate social capital, which in turn can create economic opportunities, strengthened social networks and organised political mobilization' (Sinah, 2005, p4). This view of the role of the mobile phone as a panacea to solve social and economic woes through its link with social capital is an about turn on Putnam's belief that screen time detracts from forms of interaction which feed social capital: ' … heavy users of these new forms of [electronic] entertainment are certainly isolated, passive, and detached from their communities, but we cannot be entirely certain that they would be more sociable in the absence of television. At the very least, television and

[27] The same beliefs were attributed to landline telephones in their early days as a technology. In describing the public negotiation over the telephone in England at the turn of the 20th century, Stein observes: 'Perhaps of equal importance to London's middle-class elites was the telephone's symbolic associations with modernity; for in their demands for an efficient telephone system was the desire that London should show itself to be a great capital and Imperial city by demonstrating that it was also technologically and commercially progressive'. (Stein, 1999, p47)

[28] Although popularly held, this view is not backed by statistical evidence. Anderson analysed the relationship between mobile use and Quality of Life (QoL) in the e-living dataset and found that' …simplistic conceptions of ISTs contributing to overall QoL are misplaced. In no country did acquiring a mobile phone, internet access or broadband internet have any positive effect on overall quality of life. Indeed, in some countries there was a negative relationship.'(Anderson, 2004, p25)

its electronic cousins are willing accomplices in the civic mystery we have been unravelling, and more likely than not, they are ringleaders' (Putnam, 2000, p246).

2.3.8 Whither community?

Local community groups persist today as an established facet of democratic society. However, there is an acceptance that their strength is fading, and this gives concern to both individuals and governments. Technology is implicated on both sides of the 'problem' - it is seen as a factor detracting us from community involvement, and also as part of the solution to this loss. As Stevenson frames the question: 'Are new media technologies responsible for undermining a sense of community by robbing people of participatory public space or are they sites where more diversified relations of solidarity can be made?' (Stevenson, 2000). Underlying such questions is the changing nature of community itself. If we expand its definition and recognise the same validity of personal compensation can be gained from online interactions, a different picture might suggest itself with respect to participation in civil society.

The rise or fall of active citizenship has implications for government policy. The close links between community life and social capital imply that the interactions fostered through working together will ensure health and harmony in society. But this is not necessarily true. Not all social capital is positive, and neither is all use of technology. Gaining an appropriate balance needs careful management.

Chapter 3
Research Design

As seen in the research literature reviewed in chapter two, there is a growing body of evidence on how widely the mobile phone as a technology has been adopted and integrated into everyday communication patterns, often in unexpected ways. This could be seen to have positive consequences for a local community group in that the potential of anytime-anywhere talk and text links might enhance the ties between group members. However, the phone is also part of the broader spectrum of technologies which are said to divert us from face-to-face communication, the essence of everyday off-line community interaction. Its role in the maintenance and persistence of local community groups, and the part they play as a source of social capital, is thus in question. Local community organisations are recognised as an important structure in healthy society and their future is being questioned. The broad purpose of this research is to explore this ambiguous relationship by examining the experiences of an existing community group vis-à-vis their appropriation and use of the mobile phone both as individuals and within the group, and so gain insight into the role of technology in creating and supporting an environment in which the community might thrive (or not). This information may then be analysed in the context of reports of diminishing local communities and a consequent decline in social capital. In this way the research incorporates the key question of STS - how do we understand the implications of technological change for society?

3.1 Research motivation and aims

The initial rationale for this study was based on my interest in the many changes seen in Irish society in the past thirty years. Once seen as industrially backward and with a traditional organisation (in the *gemeinschaft* mould), during the 1990s Ireland made increasing strides in becoming a centre for multinational investment and a forerunner in technology production and commerce. New-found wealth offered citizens the chance to explore new lifestyles, many aspects of which were to break with the ties of church, family and locality which had previously bound them. The role of technology in these changes was in ways liberating – it brought work opportunities and a comfort with the electronic world. It also took citizens' focus from a local and parochial setting onto one where travel, outside ideas and new lifestyle opportunities offered themselves. The government of the time were influenced by Putnam's writings, and they became concerned that this might cause the Irish population to move away from supporting local endeavours into a more self-centred lifestyle, leading to a less caring society. They instigated an initiative (the Taskforce on Active Citizenship) to intervene and stimulate voluntary social structures. This dystopian perspective on Irish society was not shared by all, and the ensuing dabates led me to consider how the opportunities brought by technology do not necessarily have to displace older ways of life (as might be suggested in certain narratives), but rather how the two can coexist in a complex interrelationship.

Although the focus of this study is to gain an understanding of how people actively appropriate technologies within the community, the twin factors being explored here, technology use and community participation, are independent variables. I choose to approach their study in a bottom-up fashion, looking first at the mobile phone practices of individuals, and then at the communication patterns ensuing within the group. I then consider what meanings these might have for the cohesion of the group as a whole in the context of the ongoing debate over social capital in Irish society.

This gives two main streams of investigation to be addressed: personal ownership and use, and group communication patterns. With the first, there are a wide variety of reasons why community members initially adopt the mobile phone, and make individual choices over its form and the particular import they attach to it as an owner. In gathering this information I can give substance to the statistical data available regarding the adoption and diffusion of the mobile phone by Irish users. To understand its significance in a person's life, it is also necessary to probe both articulations of the mobile phone, not just its meaning as an electronic artefact but also those that manifest in its communicative function – how it might be used to manage personal relationships. Each user has his or her own ways of incorporating the phone into their everyday interactions, choosing whom to contact, when and with what regularity, and the mode of communication (voice or text) which they employ. These factors are influenced not only by personal needs and peer influences, but also by one's attitudes to new forms of technology per se, and the larger questions posed by STS studies.

For any individual, using a mobile phone for their community interactions is simply an extension of regular everyday use, targeted at a particular section of their social network. The study of individual consumption patterns should therefore help to construct an understanding of how individual actors use the phone to 'do community'. While this might initially provide a specific and close look at individual practice, the sum of these experiences have outcomes for the group as a whole, and examining these might lead to an understanding of the second main issue of this thesis – is the consequence of mobile phone use a strengthening or a weakening factor in the continued existence of local community? Of itself, a face-to-face local community offers the opportunity for socialisation – meeting one of our basic needs to 'be with someone'. If this may now be met by the constant presence afforded by simply owning a piece of technology, then the community group must have an inner coherence and strength to survive. There is the possibility that

appropriate use of the same mobile phone which is said to be tearing them apart might instead provide this lifeline to them.

Any changes to group communication patterns should be most evident in the use by some core members – the office holders who manage the group or who are engaged in its key activities. They would have already put in place strong communication links using word-of-mouth, public announcements (at the local church or in newspapers), the fixed line phone and the postal system. The introduction of new methods to transmit a message, such as email, texting, and laterally the MI, and also new places to carry this out, can only lead to readjustments and enhancements of the existing patterns they have built up over time. It should, in effect, make the job easier and free these core members to extend their role within the group. New mode of communications (such as SMS and social network sites) may also offer fresh affordances to such a group and enable members to readjust their older ways of working. These changes also have outcomes for the strength and maintenance of the group as an entity, and possibly for the social capital they engender.

There are two other variables which I wish to account for in my study, that of location (rural/urban) and that of gender. Even though much of the mobile phone research to date has been on its use in cities, those living in rural areas might have as much, or even more, need to use a mobile phone. Feelings of isolation from others can be more acute in rural areas, and the lifeline provided by the mobile phone can be, psychologically at least, invaluable. Rural dwellers are often 'on the road', travelling to work, to shop, to socialise or do business in more populated areas. There has been little or no research specifically into rural use of mobile phones. Also of interest in examining urban/rural use is the role which a community group may play in the lives of inhabitants. The allegiance to local place often plays a big part in the lives of those who have lived for a long time in rural areas, and this can be expressed through their support of any local endeavour. For these reasons, examining the experiences of members of both urban and rural community groups

might reveal interesting insights into any differences in how community life is played out in each location.

On the issue of gender, I wished to add to the ongoing debates on technology and gender as described in 2.1.6. Much has been much written (Rakow, 1998; Martin, 1991; Lohan, 1997) on the different ways in which males and females used the fixed line phone in its early days. Women, particularly in rural areas, used the telephone extensively for social interaction while men used it in a more instrumental fashion, mainly for business. Similarly, young girls were found to use the mobile more in its early days for links with friends and family (Ling, 2001a; Ling, 2001b). Although these distinctive traits may have become somewhat subsumed in a period of universal adoption, and the phone is now used by all as a social instrument, it may be useful to see if there are any obvious gendered differences in mobile use within the community groups.

3.2 Research questions

Based on the two general areas mentioned I have identified a set of three main research questions, each with a number of more specific sub questions. The first two questions are related to how we engage with technology in everyday life, in this instance reflected in the adoption of a new communications technology, the mobile phone, and the bringing it to bear on managing relationships within a close social network. The third question probes the connotations of this on the social capital of an existing community group.

1. ADOPTION OF MOBILE PHONES:
   - 1.1. How and why do individual members of a community group adopt the mobile phone and what are their experiences of incorporating it into their everyday lives?
   - 1.2. Do interactions within the community group influence mobile phone acquisition and use?
   - 1.3. Are there demographic (specifically rural/urban or male/female) differences in these responses?

2. THE USE OF THE MOBILE PHONE TO MANAGE COMMUNICATION:
   - 2.1. Why, when and how do community members use mobile messages to keep in touch with friends, family and other community members?
   - 2.2. What factors motivate (or inhibit) using the mobile phone to carry out these relationships?
   - 2.3. Does the provision of anytime, anywhere communication offer any new opportunities to the maintenance of these relationships?
   - 2.4. Are there demographic (specifically rural/urban or male/female) differences in these responses?

3. OUTCOMES FOR COMMUNITY RELATIONS:
   - 3.1. Why are the wide personalised networks which members maintain active through their mobile phone not drawing them away from the local community as a social entity?
   - 3.2. Is use of the mobile phone within the immediate social network of a local community group changing the pattern and strength of linkages between members?
   - 3.3. Does use of the mobile phone within the community group produce any change (increase or decrease) on instances of face-to-face interaction and the consequent social capital it might engender?

The first two questions focus on the personal domestication of the mobile phone by examining (in question one) the choices individuals have made around its appropriation and adoption, and consequent to that (in question two), its incorporation into their everday communication patterns. Together, these cover both articulations of mobile phone use – its meaning as a consumer artefact, and how it might be used in managing relationships. Examining these choices should give some insight into the incorporative practices around a new technology and let us see how this cohort has exploited the affordances of a new communicative device. The group as a whole is, in effect, greater than the sum of its parts, and it is by trying to match and tie together the threads of individual practice that we can get a more overall picture of the emerging community experience. Examining communications by and for the community group will establish how the mobile has changed interaction for the group as a whole. It should also provide insight into any specific community applications for mobile phone use. Question three is a reflection on the theories which suggest that 'networked individuals' may have a reduced interest in meeting others in community settings and that this will have a consequential reduction in the social capital generated.

My findings on the issues raised in question one are detailed in chapter five, which reports on the domestication aspects of mobile ownership. Chapter six reports findings on the second articulation, relationship management, and in chapter seven I analyse these findings to develop some insight into the inferences of emerging technology use for face-to-face community life.

3.3 Research strategy

After evaluating the different approaches to examining the development, introduction and assimilation of technology by society as a whole (as described in section 2.1) I believe that the domestication approach is the one most appropriate to studying the mobile phone in a community context. It is particularly suited to an examination of technology in everyday life, as it looks at '… both the interaction between the individual and the social context in which the artefacts are being defined and used' (Ling, 2004a, p33). As such, it acknowledges both the idea that society fashions technologies and that these technologies have consequences for the organisation of society, essentially a social shaping approach. As a pragmatic choice, it provides a fairly structured, but not inflexible framework for interrogating an individual's relationship with the device itself. However, it has limitations, and requires certain modification in order to examine use of a personally-owned artefact, and one that is used in public and private spaces, which is discussed below (section 3.3.1). I evaluate the success and shortcomings of the approach in my conclusions, in chapter eight.

Another key strategic decision in this investigation is on how to focus on a local community as the object of my study. I choose do this through a case study, by looking at what happens within a specific local community group and examining mobile phone use by its members for activities pertinent to that group. Using a case study has many advantages in that it '... provides a rich understanding of the context of the research and the processes being enacted' (Saunders et al., 2003, p93), but I acknowledge it also has limitations, particularly evident when trying to analyse the research outcomes. These are discussed in section 3.3.2 below.

3.3.1 Domestication as a framework for research

The Domestication framework (as described in 2.1.4) has become a widely accepted and suitable approach to studying the everyday use of technology. The metaphor used by Silverstone to describe engagement with a new technology, 'the taming of

the wild and cultivation of the tame' (Silverstone, 1995, p64) can be applied to mobile phone use in that a new owner must take an artefact previously unknown to them and ease it into their familiar practices while also allowing it to grow in both use and function over time. The initial actions on buying a phone and choosing the model and payment structure are inner negotiations a new user might take, with the support and advice of others, by which to justify their actions – the *appropriation* phase of domestication. Day-to-day habits around where to keep it, when and where to use it, habits in recharging etc. are all part of domestication practices – the *objectification* and *incorporation* phases. These are essentially the topics included in questions one and two of this study which focus on adoption and everyday relationship management.

Prior to buying a mobile phone, we are not only affected by the imagery of advertising, but are also influenced by how we see it being used around us. Although early adopters may have had to take a 'leap in the dark' in their purchase, their use was evident for all to see when they used it in public places. This gave a wide audience the opportunity to identify how having a phone might be useful in their lives too and so engage in the *imagination* phase of the domestication process. The spreading of knowledge and encouragement in this way was widespread in the appropriation stage of mobile phones, and could be particularly evident in a fairly closed circle such as that found in a local community group. Fellow members might show by example how useful the device is in keeping in touch and act as 'warm users' (Bakardjieva, 2005) in supporting the decisions around purchase and learning to use it.

The life changes occurring during *objectification* and *incorporation* for a new mobile phone owner are evident through small decisions, for instance how to display the object and when and where to use it. We slip these into place, but don't let them undermine the fibre of how we view ourselves: '…we are different because of the ICTs we adopt, incorporate, or ignore. But we think of ourselves as the same.' (Katz,

2007, p18). When we place our first call, or invite someone to record our number, we are employing *conversion* to enter the public realm as a mobile phone user. Once we are an established user we live with our mobile phone, and that which is initially unfamiliar and a novelty becomes a seamless part of ourselves, an everyday artefact.

When an individual first becomes a mobile phone user it can have a ripple down effect on the everyday life of others, as they become aware of the new user through the calls they make. This could be thought of as *domestication of the second articulation*: bringing technology into not only our own lives, but also into those whom we reach. Building up new patterns, such as calling to say we are leaving work now and will be home soon, or being open to an impromptu call for coffee when we are out shopping, bring our lives closer to those around us, and allow them to also modify their everyday practices to suit. As we make our phone use known through the *conversion* phase, we also alter the knowledge others have of us. For instance our friends might know that we leave our phone on the desk when we go to a meeting, but will respond to a text message when we return. Ling would extend this to suggest that in becoming mobile phone users, we become a different person in the eyes of others:

> As others in our social circle find out that we too are consumers of a particular artefact, their estimation of us changes. Their perception of the object and their perceptions of our display and use of the object, whatever it might be, become parts of their understanding of who we are. These insights affect their definition of us and influence the unfolding of the interaction. In the rubric being developed here, the artefact in some ways forms the interaction. (Ling, 2008b, p63)

The domestication process need not be a one-off event, as continuous use means continuous negotiation of how we use and interact with the technology (Haddon, 2003). We might change our choices and attitudes due to becoming familiar with the handset, or with the advent of new features or services, improved cost models, and fashions. We also may see changes due to our own life stage and the corresponding alterations in our social and family life. These negotiations can see us re-evaluate the

role of the mobile in our lives, and as such re-objectify or re-incorporate it. We are also required to engage with the initial phases of domestication (re-appropriation) when we replace (and usually upgrade) our handset and we are forced once more to deal with a decision making process in a market which is ever keen to move us forward into buying more full-featured sets.

While useful as a framework, domestication also has some limitations when used to research the mobile phone. To begin with, the very term 'domestication' tacitly implies the home as a focus for use, and this suited the study of early ICTs such as the television and the personal computer, which were large or expensive items and used in a fixed location. In these cases, domestication is a joint and (normally) negotiated process by those living together on decisions such as which model to buy, where to place it, and the establishment of the 'house rules' which might govern its sharing and use. In the home, domestication often does not result in a closed conclusion, but can be the source of continued conflicts over use and control. Such outcomes therefore reflect the 'moral economy' of the household as reflected by the power balances within (Silverstone et al., 1992). However, the mobile phone is a personal rather than a shared technology, and, for the adult user, appropriation is an autonomous decision. In fact, an individual's mobile phone use affects the household only in how it is used to manage relationships with members of it, or changes in some way their use of the shared land line. Where 'moral economy' comes into play is in the development of acceptable social patterns of behaviour around the phone. Sørensen articulates this:

> The domestication of the mobile phone is a moral undertaking in a double sense. We have observed that moral concerns are invoked in the account of the domestication process, but also that the construction of such norms is done as a collective aspect of the domestication. People discover a need for norms and struggle to negotiate what they should be. In this way they retain agency, while the mobile phone remains fluid. (Sørensen, 2006, p55)

Domestication implies use within the group of people comprising the household and use in the fixed place of the home. However, the mobile phone's role in everyday life extends beyond the home to all the places which we inhabit, such as work, recreation, the street, or on public transport. This issue is explored by Morley (who carried out some of the early studies of home media using domestication) when he seeks to update the concept in a more recent paper (Morley, 2006). He poses the question 'What's 'home' got to do with it?', and argues that many technologies are now de-Domesticated and have left the home, citing the example of television sets now being found in public spaces such as bars, restaurants, laundrettes and airports. Not only is the technology out of its original space, so are the actions we perform around it: '… the mobile phone fills the space in the public sphere with the chatter of the hearth, allowing us to take our homes with us.'(Morley, 2006, p35). For current ICTs, with blurred boundaries of both presence and performance, the home analogy might be considered superfluous to domestication as a concept.

Although not a shared item or one used within the fixed place of the home, the mobile phone is used within a shared (public) space. In this study it is also examined within a closed social setting, that of the community group. As a social network, the community group will develop its own ways of doing things and these collective practices will set 'rules' and expectations which will determine how individual members perform. In this context, there is also a necessity to find a place, a 'domestication', for use within the group as a whole. Domestication within a group can be viewed as a sum of individual domestications, but also with an impetus of its own – the moral economy of the community. This should become evident in the outcomes of question two.

One final critique of the domestication approach is that, while it may be suitable to describe a technology when it is innovative, it has less application when it becomes

an established and accepted part of our lives. Ling would have us believe that domestication ends when a technology becomes normalised in society:

> As soon as an object becomes a routinized part of everyday life, much of the analytical power of the approach disappears … mobile telephony will follow other consumer items into the gray future where they have lost their valence. To the degree this happens, domestication 'theory' loses some of its ability to describe the situation. (Ling, 2004a, p32).

Although the mobile phone has now reached full penetration in Irish society, I would argue that domestication is still a valid way to examine its everyday use. Many adults who have lived most of their lives without mobile phones are still enamoured with the part it has played in their lives in the past 10 years during which it has become an artefact of common consumption. They are still altering their ideas and modes of use and will continue to do so, constantly finding different ways of accepting and incorporating it into their patterns of practice. Newer 'smart phones' are opening up other opportunities of use, and while they do so the role of the mobile phone as a technology is still evolving.

Despite any limitations when applied to personal mobile devices, domestication can still provide a suitable framework to examine the process of 'taking on' a piece of technology. It enables us to focus on the micro view, by examining our personal attitudes as reflected in the decisions we take over the technology we buy, and how we place and use it. It also covers the complete process of consumption, reflecting not only purchase but incorporative practices and everyday use too, and it can give an insight into the meanings we attach to the artefacts themselves. This gives a fulsome appreciation of the place of the technology in our lives:

> Tackling the tricky question of how practices in everyday life are related to grander social processes and structures, the [domestication]concept proves to be particularly useful for the empirical in-depth analysis of daily media consumption (Berker et al., 2006, p4)

For all these reasons, I intend to adopt it in this thesis.

3.3.2 The community group as a case study

While at first it seems obvious to use a case study to examine community mobile phone use, my choice also raises some concerns. In order to avoid 'context determinism', where the technology may be considered an essential element to the group's existence, the chosen community group to be studied needs to be one which came into being and was successfully operating before mobile phones were commonly used for social communication. Being a mobile phone owner/user therefore becomes a choice external to membership, although it may influence the strength or participation in that membership. Since my definition of community is based on co-location, I also require a setting where the existence of the group is based on individuals sharing a physical space, a 'local' place where communication is primarily face-to-face.

I was apprehensive that if I selected a single group, I might choose one which is atypical, and where use of the mobile phone was perhaps influenced by a few strong members who encouraged (or discouraged) use. This would give me problems later when I went to analyse my findings:

> … case studies are not useful for generalizing. There are two aspects of this position: that it is not possible to generalize from a single case, and that if a number of cases are used for the purpose, it is extremely difficult to establish their comparability. Each case has too many unique aspects. (Blaikie, 2003, p218)

In an effort to overcome these problems, I chose to use two groups, treating them as a single case study, but extracting any differences which might arise within the two component parts and seeking to explain these where necessary. I also realised that in choosing my two groups carefully I may be able to use them to examine the factors of rural/urban location and that of gender.

These reasons set the criteria in determining the type of community groups required. They must be a group who are well established, and have a (social) reason to communicate with each other regularly: i.e. their patterns of communication are not just determined by whim, but rather by some structured joint objective. They should also be a group who know each other well face-to-face over a long time, and where social capital would have been an opportunity to thrive. This led me to the consideration of a club. A formal club will have a focus outside friendship, which gives it an overall stability less likely to be affected by the changes in life circumstances of individual members. I also wanted to interview adults rather than teenagers (whose mobile phone use has already been extensively researched), as they would be most able to see changes, having known the club in a pre-mobile phone world.

I considered a number of different types of group or club - musicians who meet regularly in 'sessions' to play together in local pubs, a local drama group, or a neighbourhood action committee. However, the choice which best fits the criteria I set was that of a sports club. Again, this gives a wide range of choices – athletics, rugby, basketball, judo etc., but I decided that a sport with team games would be best, as it gives the group a particular reason for cooperation and communication. The games administered by the Gaelic Athletic Association (GAA) are then an obvious choice. The GAA is the largest sporting organisation in Ireland, with 2,500 clubs playing Gaelic football and the field game of hurling. One limitation of the GAA is that the sports are male dominated, and there is the possibility that if I chose to interview those engaged in the running of the club and active players I might have difficulty keeping a gender balance. For this reason I decided that one of the groups chosen should be focused on women's football.

Background on the GAA, its administration and the part it plays in Irish community life is further explored in chapter four.

3.4 Research methods

Studying everyday mobile phone use puts particular demands on the researcher. Since the mobile phone is designed to be a personal device, and is often permanently with its user, it is small and unobtrusive in size and may be used anywhere. It is thus difficult to become immersed in 'live' data gathering, and this certainly cannot be done invisibly. Added to this, any co-located observer to a mobile call can only experience one side of any conversation, and so the researcher/observer must assume any relevant contextual information. Some of the solutions to this problem are the provision of electronic data capture methods, or asking the user to report their calls and reflect on their patterns of communication. Each of these has also limitations. The challenges for researching a communications artefact are examined below.

3.4.1 Methodological challenges in researching everyday mobile phone use

In order to monitor mobile phone use an ideal scenario might be that the researcher could follow all incoming and outgoing calls and record the call content, the participants involved and their behaviour and interactions while taking the call. This is, of course, impractical, due mainly to the varied possible locations of the user, the size of the device and the full-time task entailed.

We use the mobile phone when we think of something we want to say to someone at a distance, and we use it when we receive an incoming call or text. These transactions are nearly always spontaneous, and can take place anywhere. To get a full picture of daily use, the researcher would need to shadow the user continuously, recording the location from which a call was made and how long it lasted, and then ask for a report on the call content. Not only would this be time-consuming, it would also be intrusive and possibly inhibiting for the user while yielding only one side of any communication made. One very complete view of mobile phone use within a specific geographic location is that of Horst and Millar in their study of the cell phone in Jamaica (Horst and Millar, 2006). The authors tie

mobile use by low-income Jamaicans with their attitudes towards society and their lifestyle choices, by immersing themselves in the daily life of the subjects. Here they combine ethnography with historical, political and economic contextualisation in order to produce what they term (in the title of the book) as *An Anthropology of Communication*. This affords a much richer reward than simple observation, but with a considerable investment of time by the researcher and tolerance from those under study. It is a very comprehensive approach, but an impractical way to carry out research for a thesis such as this.

Since mobile phones are designed for personal use, the physical artefact itself also limits how the researcher might be fully included in everyday use. The very size of the device forces any co-present to become an observer (and an eavesdropper), rather than a co-partaker in any call. Size also limits the researcher seeing how exactly the user handles their phone, or what might appear on the screen. As Hagen notes:

> … mobile devices are designed on a personal scale for relatively discrete use within our personal body space; a mobile phone or PDA is intended to be used by one person at a time. Therefore, capturing or analysing interface actions of the user, or observing a devices screen, can be physically impossible. (Hagen et al., 2006, p137)

Despite these shortcomings, a number of researchers have used observation techniques very successfully in their mobile research. In order to do so, they have used a form of 'constructed observation', basing themselves in a certain place and observing use within that physical area. An early study by Murtagh uses such an ethno-methodological approach in order to define some of the 'rules' of mobile interaction (Murtagh, 2002). This research is mainly based on observation of people using mobile phones on a train, where both user and observer are in a fixed position. Ling also used observation in his study of how the mobile is used in the everyday rituals of life (Ling, 2008b). He does this by simply placing himself in a public space and waiting for someone to begin a conversation on their mobile phone, then recording how they interacted with the local environment. He also

'experimented', manipulating himself into positions where he intruded the physical space of the caller or placed himself into audible range, and then observed the consequent reactions. He defended this as being 'in the spirit of Goffman' (Ling, 2008b, p 19), whose philosophical approach underlies his study. In these studies ethnography has proven an appropriate method for watching users' behaviour while using a phone in public spaces, but it has limited return in obtaining a fuller picture by a fixed set of people. I realised that this would not be a practical way for me to determine the use patterns of club members.

One other limitation of tracking each call made (and specifically on recording call content) is the fact that any phone conversation is a private dialogue between two people. If the researcher does gain access (for example using the 'loudspeaker' facility on the handset), there is also the effect of a third person included in what might normally be considered a one-to-one conversation. Here the presence of the eavesdropper might act to make the user self-aware in such a way as to make the exchange unnatural. For ethical reasons, one would also need to inform the co-respondent that the calls are being monitored, which may inhibit the incoming conversation.

There have been a number of attempts to redress these problems in mobile phone research, in particular by designers, mainly through asking the users themselves to record the data through self-reporting, logs and diaries. Grinter and Eldrige used this in their study of teenagers' texting. Each participant manually recorded (for payment) extensive details on each text sent (Grinter and Eldridge, 2001). This makes for a very revealing and comprehensive study, but is a considerable overhead for the participants, particularly if they are busy or travel a lot. A possibly more accurate method of mediated data collection is where the technology itself gathers the data. This can be done by devices such as the *ContextPhone*, a piece of open source software which records such information as the user's location and with whom they are in company, as well as details on the timing of calls (Raento et

al, 2005). The technological approach ensures accuracy, but there are ethical considerations for both the research participant who may later wish to exclude some actions from record, and also the issue of the inclusion of information on others in the vicinity who have not volunteered their co-operation. While the data trace provided by such mediated data collection methods is very rich, they also provide very large data sets to be analysed. Such methods are not feasible in a self-funded PhD study such as this.

To meet the questions posed in this research, there are some factors which might be determined through observation. For instance where on their person a user might keep their phone, how comfortable they are with the handset, or how they handle interaction with any persons co-present during a call (these are all aspects of the *conversion* phase of domestication). More detailed in-depth recording of calls is limited due to the practical and ethical reasons outlined.

3.4.2 Choosing methods

In choosing methods to carry out my study, I needed to find a way to capture individual incorporative practices of the mobile phone and also the essence of the group experience of club communications. Exploring the former entails not only finding out the decisions users take around their phone, but also its meaning and significance to them, and is a study best carried out by qualitative methods, such as interviewing. Capturing the patterns of group communication has its focus on gathering a small amount of a data from a larger number of people, in essence a quantitative exercise. I therefore decided to use a mixture of the two approaches: semi-structured interviews, mainly with core club members such as players and administrators, and a survey of club members in general.

Both qualitative and quantitative methods, either singly or together, have been used successfully in a number of studies of ICT use. Considering the widespread use of the mobile phone, large scale data sets are often used to describe its adoption and

the decisions made by users around purchase and volume of use. Equally, anecdotal evidence is often used to describe the nuances of user experience, such as the reasons why certain choices are made, the content and types of messages sent, or the feelings of security engendered by ownership. In this study both are relevant as decisions are made within the wider public environment of a society 'going mobile' and a community group experience, but these decisions, the circumstances informing them, and their effects on the minutiae of our lives are individual experiences. The study therefore requires looking with both a wide-angle lens and a close-up one, enabling a view of the same phenomena from two quite different angles.

Although not done often, quantitative and qualitative approaches have been worked together in STS research in order to complement each other. Frissen and Punie defend their use of mixed methods (what they describe as a 'pluralist approach') in their study of ICTs in busy households, and make a case for its acceptance:

> In general, the qualitative study provides an understanding of a phenomenon observed in the quantitative study that could not be explained there. As a result of this, the quantitative study provides a larger population for an understanding that is generated in a small case-study. (Frissen and Punie, 1997, p90)

Mixed methods have also been used successfully in domestication studies. Haddon describes their use in a mobile phone study which examined the ways in which people develop strategies to control their communications, either because of the cost of outgoing calls or the disruptiveness of incoming ones. :

> A European five-country survey explored the generalizability of such issues and strategies, which, while not being unique, was also not so common in more traditional surveys of ICTs. However the complementarity of methods was clear in that qualitative material showed the range of experiences that lie behind concepts like 'control strategies' as well as the degrees of success and sophistication in implementing them. (Haddon, 2006, p199)

Hopefully, in my study, the survey might yield patterns of behaviour around communication use, and interviews might go some way to explaining the 'why' of the decisions surrounding them.

The subject matter of research question one (adoption) is very much focused on the personal decisions and choices of an individual phone user. This requires examining their engagement with technology at a micro level in order to find out the why, where and when of everyday use. I consider that through interviewing I can seek out the richer information beyond appropriation – how users feel about their own phone, how ownership might have changed their own daily lives and how they use it in playing out community life. It is also possible in an interview to encourage participants to stand back and comment on their overall patterns of use, and explore any results which they themselves may find surprising. As Hakim points out:

> The … great strength of qualitative research is in the study of motivations and other connections between factors. The question 'why' often cannot be asked, or answered, directly and may involve a variety of circumstantial and contextual factors creating links between, or choices between, apparently unrelated matters. Whether one is seeking explanations at the social-structural level, or at the level of individual choices of life styles, qualitative research can be extremely valuable for identifying patterns of associations between factors on the ground, as compared with abstract correlations obtained from the analysis of large scale surveys and aggregate data.(Hakim, 1987, p28)

Research question two (everyday relationship management) requires the owner of the phone to reflect on their personal patterns of communication and the role of the mobile phone in the maintenance of their personal relationships, in particular those within their chosen community group. While it would be useful to observe 'live' the interactions within a bounded social group this is not possible unless the group are all gathered together, the very instance when they are least likely to use their phones to communicate with each other. However, gathering data in order to answer question two can also be done through interview by asking the individual to place themselves within the context of their community group and to reflect on the relationships they hold with other members of that group and the part which the

mobile phone plays in establishing and maintaining the links which enable the group to function most successfully. Semi-structured interviews should enable me to explore these 'circumstantial and contextual factors' as mentioned by Hackim (1987) as they would give me the flexibility to explore in more depth any statements which could be a source of fruitful further information.

Interviewing is also a pragmatic choice. I am comfortable with it, and recognise that although mediated methods (such as asking respondents to keep a log of their usage over a set time frame) may provide an alternative way to answer these questions, they would be an intrusive and time-consuming exercise to foist on busy individuals who have no particular interest in the outcome of my study.

Technology moves on very fast and new forms of the mobile phone (the smartphone) saw speedy integration during the period I was writing up this thesis. For this reason it appeared prudent to carry out some short follow-up interviews post-2013 to reflect on the changes which might have been brought about by new affordances offered to club communication.

The idea of a survey is to gain a snapshot of general phone appropriation and use by the wider club community, mainly supporters. Questionnaires can enable brief responses on reasons for purchase, payment choices and regularity of use, responses which may help in ascertaining adoption choices as queried in question one. They may also be used to examine the management of social relations (as per research question two) by asking about the different types of communication media used to contact different cohorts, including other club members. I decided to distribute these to people attending local games, so the questionnaire needs to be brief, as they are to be completed on the spot by a match crowd who might possibly be more preoccupied by the game than commenting on their telephone use.

To supplement the survey material there is a plethora of statistical information available on both mobile phone use and community participation in Ireland, easily obtainable in the public domain. The International Communications Union (ITU) produce statistics for each country detailing the penetration of mobile phones (users per 100 inhabitants) alongside population size and GDP, and this data stretches back to 1997(ITU, 2009). The Irish Communications Regulator (ComReg), and their predecessor, Office of the Director of Telecommunications Regulation (ODTR) produce a quarterly key data report, with statistics such as the number of active subscribers, the number of calls and texts made, and the payment type. Over time, this data has become more rich, and now gives details such as SMS and multimedia messages (MMS) sent, and also the spend per month. ComReg also produces comparison graphs showing Irish statistics alongside those of other European countries. These statistics are available back to 1996, and through them one can build up some patterns regarding the diffusion of the mobile phone in Irish society.

There is also adequate statistical data available about the extent of community participation in Ireland which should support my assessment of the strength of local community groups and social capital in both urban and rural areas. An Irish government report, *Community Involvement and Social Networks*, published by the Irish Central Statistics Office, draws data from the 2006 Quarterly National Household Survey (CSO, 2006). This quantifies the overall levels of participation in organised groups and voluntary work, explores how people keep in touch with their relatives and friends, and also focuses in on the neighbourliness and levels of trust felt by people. This data is valuable to this thesis in that it produces a current picture of organised community life in the country. Other government reports providing useful quantitative analysis include *The Policy Implications of Social Capital*, produced by the National Economic and Social Forum (NESF) in 2003, and *Public Perspectives on Democracy in Ireland*, published by TASC, an independent think-tank dedicated to combating Ireland's high level of economic inequality and ensuring that public policy has equality at its core. (NESF, 2003; Clancy et al., 2005). There is

also a 2005 paper produced by the Economic and Social Research Institute (ESRI), *The Economic and Social Value of Sport in Ireland* (Delaney and Fahey, 2005), which makes links between the community contribution of sporting organisations and social capital. There are also a number of studies available which specifically focus on the links between ICT use and social capital.

I recognise that in selecting mixed research methods for this study, there will inevitably be trade-offs: while the large scale data available from secondary sources may be more amenable to drawing general conclusions on use, it provides no contextual information; alternatively, examining closely the communication patterns of a small number may yield a rich set of data, but one cannot be sure that it is in any way typical. I hope to address this in my analysis in chapter seven.

3.5 Carrying out the research

I had planned to run the questionnaires and interviews in parallel, using the summer months when GAA activity was at its height and interaction in the club might be most lively. I thought I might first circularise the questionnaires, and ask anyone who had completed one if they would be willing to be interviewed, but did not appreciate that it would be difficult to develop enough of a rapport with someone in this short time to encourage them to speak at more length with me. In the end I established personal contact with individual members of two clubs and a 'snowball' method (recommendations by respondents) to meet others. Initial data gathering was done between July and September 2006, with a short follow-up review post-2013 (to assess the impact of smartphone use on my initial findings).

3.5.1 Making contacts

I did quite a bit of background work in trying to find clubs where I might base my research. I contacted the GAA headquarters, hoping that if I could get an introductory letter from them it might be of some help. However, I got no reply. I searched the internet and scanned local newspapers for lists of clubs and match fixtures, but soon realised that I needed an opening into a club – someone who might introduce me and help to make initial contacts. I knew a student who lived locally to me and who played hurling, and he provided me with the contact details for the secretary of this (rural) club. The secretary was a quiet man who was somewhat hesitant about giving me contact details of club members. He first said he would send me a list by email, but when this didn't materialise I rang him and he had reconsidered. He did suggest I go to a match the following weekend, as there would be a crowd and I could approach people there. He then rang a few days later to say this match was cancelled, which demonstrated that, although he was not able to cooperate himself, he had not forgotten my presence. Sometime later he gave me the number of the chairman, who agreed to be interviewed. He was slightly younger (mid-30s) and very open to my research. He acted as my first interviewee, and passed on the number of another member who might help. I used such a

'snowball' method of finding people after this, usually asking someone for a contact name and number after their interview, and requesting that they mention my research to this person so that I would not be making a 'cold call'. I then called the new prospect a few days later and suggested a meeting. In this way, I completed 13 interviews in this club, mainly players (10), with 2 administrators and 1 supporter. The primary game played in this club was hurling, played by males, and I only managed to interview one woman among this group. I had specifically wanted to talk to the senior team trainer in this club, as he was mentioned as being a source of text messages by several of the players. However, he proved elusive, despite my calling him several times, asking others to explain to him what was involved in the interview, and leaving messages for him with other club members.

I also needed to talk to members of an urban club, and find more women to interview. I made the first contact with the second club through a student whom I had heard talking about an upcoming football match she was playing. I interviewed herself and friends whose numbers were passed on. I interviewed 8 in total in this club, 5 players and 3 administrators. Only 1 of these was male. The women's club members were even more hesitant about passing my number on, and in the end I came to a full stop when my contacts ran out, despite numerous attempts to contact those whose numbers I held.

The sports clubs which contributed to my research are both are well-established, and attract members and supporters from their local geographic area, within a catchment area of perhaps 5 kilometres radius. In the rural area in particular, members have strong bonds – they often have gone to school together, live nearby, have family ties and share a social circle. In essence this satisfied the definition of a traditional off-line community as '… a relatively stable unit with many short and overlapping communication lines and joint activities' (vanDijk, 2006, p166). Members meet regularly, perhaps twice weekly during the playing season. Although much of their focus is on the games played, each club also provides an

active social life for members. The urban club was based in Galway city, the largest conurbation (72,500 people) on the Atlantic seaboard (CSO, 2007), and the rural club was about 45 kilometres east of the city.

This part of the research was much more problematic than I had envisaged. Overall, people were very cagey about being interviewed, and I made several calls where I was asked what company I worked for and why I might be interested in an individual's phone use. They then would say 'I'll think about it and call you back', and then never did, and didn't answer subsequent calls. It was a period when there was a rise in 'cold calling' by commercial interests, and almost everyone I spoke to had experienced this (mainly on a land line), and admitted it was making them hesitant about talking to me. I also encountered a problem in the hurling club where, since the county team at that time were very successful and engaged in the all-Ireland competition, and since some club members were involved, the organisation had agreed to suspend all club games until the inter-county competition was complete. There were much fewer games and meetings in the club at that time due to this.

The follow-up interviews were much less formal and comprised re-contacting some of those I had spoken to earlier and establishing what changes might have been made to communications in the clubs when the regular voice and SMS-enabled mobile phones were largely replaced by internet enabled smartphones.

3.5.2 Interviews

I planned to carry out semi-structured interviews because I was unsure what unexpected topics might arise, and if something original was said I would wish to probe for further information. I also wished to have the freedom to allow the conversation to flow in a way determined by the interviewee. However, I did have a set number of topics to which I required answers, so I drew up a list of questions to guide the direction of discussion. As already mentioned, there are two cohorts

within the club who might have different communication requirements with respect to the community group. These were firstly the core members, club players and administrators without whom the club would not function successfully, and who would undoubtedly have specific and dedicated needs to keep in touch, as their role carried duty towards the club as a whole. Then there was the main body of members, mainly supporters, whose role rarely extended beyond attendance at matches or helping out with transport or financial support. I hoped to interview mainly the core members, as through them I would be able to define the key linkage patterns which might define club life.

Since the research questions sought to explore how interviewees had domesticated the mobile phone into their personal lives, the first set of questions asked were around the appropriation of the mobile phone – when, how and why they got their first handset, and the first steps into joining the 'mobile-owning' population. This led to questions about phone upgrades, or subsequent purchases, and the criteria they employed as existing users to making a choice of phone (a re-appropriation). At the time of interview, cameras were becoming standard in all but the cheapest telephones, and only a few more sophisticated features were available except in more expensive models. Questions were thus created around use of a camera (if any). I also asked about costs and payment methods, and, since statistics show that the Irish spend more on mobile phone use than their European counterparts (ComReg, 2007)[29],what were respondents opinions of these costs.

As the mobile phone provides new places and times to make voice calls, and also provides a new medium (SMS messages), I was interested to know which specific communication methods were used to keep in touch with specific categories of communicant: friend, family or club, and how they might have made these same

[29] Since ComReg produce their statistics quarterly, the report of January 2007 most accurately reflects the data corresponding to the time of interview.

links prior to owning a mobile phone. I felt that the reflection on making links before the respondent got a mobile phone might focus answers on changing patterns of use. I also included questions to probe the role which the mobile phone plays in supporting the individual's own social life, and their perception of changes (if any) in club communication patterns since mobile phones have become widespread.

For the interviewees, I also recorded demographic information of age and gender. I was not particularly interested in occupation, although this was often revealed during the interview process, in particular as to whether their phone was used for work purposes. I also recorded their part in the club as administrator, player or supporter, as I felt this would reflect how active they might be in partaking in, and carrying out, club affairs. In instances when someone took on two or even three of these roles, I prioritised that which I considered to have most congruency within the club – administrator, player and supporter, in that order.

I firstly trialled the interviews with two close friends - my sister and a work colleague, both of whom at the time were secretary of their local GAA clubs. I was happy with how these turned out, but the exercise made me realise that some of my questions were repetitive, and that they could be placed in a smoother sequence to maintain the conversation flow, so I made some slight alterations. I also recorded and transcribed these pilot interviews, and upon listening back to them, decided to ask a few additional questions on how the administration work of the club was carried out.

During the interview period, I kept a diary to remind me of my contacts, when to ring them back etc., and specific points of note about the interview process. I carried out the interviews at whatever location and time suited the person to whom I was talking. In all, 8 interviews took place in the respondent's home, 3 in my home, and 10 in my office in the city. Each interview took 45 minutes to one hour. I began each

interview session by explaining why I was interested in their mobile phone use, and ensuring them that the data I gathered would only be used for my thesis. I also administered the questionnaires to the interviewees, mainly as a warm-up exercise to get them to consider their phone use in preparation to talking about it with me. I had hoped to also interview non-users, and designed an alternative set of interview questions with this in mind. However, I did not come across any non-users during this study.

In the follow-up interviews I was interested in whether the communication patterns I had originally found were still prevalent when most users may have upgraded to smartphones. Club members would now have access to using social network sites, email, Twitter, VoIP and a range of apps to support group communication. I was interested in whether these had replaced or enhanced existing mobile communication in any way.

The list of interview questions and themes for the follow-up conversations are shown in Appendix 1.

3.5.3 The survey

My criteria in designing the survey questionnaires were much more explicit. I intended to administer these at games, and therefore I knew that the questions needed to be both short and unambiguous, and their number would need to be limited due to the possible difficulties posed by the location. The questionnaire was drawn up with this in mind, and targeted to be completed quickly by a wide cohort. Some of the basic interview questions corresponding to acquisition and patterns of use could also be answered (in a more limited fashion, of course) in a questionnaire. In drawing up questions, I designed them in the hope that some of the answers (relating to adoption in research questions one and two in particular) could be tabulated and act to triangulate against the richer data found by asking about these topics in interview. In order to probe for patterns of communication, I asked the

respondent to consider a family member, a friend and a club member, and consider what types of communication they might have had with that person in the past week. I gathered only the basic demographic data of gender, age group and club role (player, administrator or supporter) from the respondents.

The questions cover phone appropriation, payment method, the frequency of using SMS and voice calls and the categories of those contacted. Since most of the respondents might be supporters rather than active players and administrators, they might be expected to have a more passive contribution to intra-club communication, and so questions specifically focused on intra-club activities were minimal. I originally hoped that some of those who completed the questionnaire might also agree to be interviewed.

I asked a number of friends to complete my original design of the questionnaire to ensure that the questions were self-explanatory and unambiguous. I received helpful feedback from this which allowed me to reflect on what exactly I was looking for through each question. I altered the wording of some questions to make them more explicit and make the responses clearer to categorise during analysis. The questionnaire is shown in Appendix 2.

I got the questionnaires completed during club matches, where I approached people before the games and at half time and asked them to answer a few questions for me. Quite a few refused, being at the time engaged in conversations about the play, and perhaps not interested in completing a written form in such a public place. When I got agreement, I handed the person a form and a pen with a few introductory words of explanation, and I stood by while they completed it. In a few cases, I completed the forms myself, and simply asked the questions. There would generally be a much smaller number of women attending matches than men, but I found the women more willing to complete the questionnaire without a fuss. In all, I received completed questionnaires from 34 males and 19 females (53 questionnaires in total).

3.5.4 Other data gathering

Attending matches also gave me the opportunity to observe use of mobile phones among the crowd. This was as might be expected – little use during the course of the game, but texting and calls occurring when a score was made. People appeared to have no inhibitions on use, but it was obviously difficult in some instances for them to talk on the phone, due to noise of the crowd around them. During a sports game, the idea of finding a private 'bubble' to speak at leisure is practically impossible. Although I have not chosen observation as a formal method of data gathering, as a researcher into this topic I am always alert to the use of mobile phones in public and do considerable watching of other people's use. This also helped to inform my research design.

I also decided to adopt one other small exercise which might let me see the interviewees use their phone and so observe their comfort and skills in using the device while yielding me some quantitative information. I asked them to classify the last 10 calls they had made, and the last 10 they had received through their handset[30]. This required them to look in the 'call register' of the phone and report if each of these calls was to/from their family, a friend, their work or a member of their local community group. I provided a table for the results. This small piece of data gathering was not difficult to execute. Upon completing an interview, I asked the interviewee to carry out a small exercise, related to who they had recently called. I then handed them a pen and asked them to complete the table with the instruction: 'If you know how to access the information, categorise your last 10 calls received/ sent as recorded on your phone by ticking in the box to show who these were with'. The table had a column each for Friends, Family, Sports, Work, Others (see Appendix 3).

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[30] Thanks to my supervisor, Robin Williams for this idea.

Asking respondents to carry out this task also demonstrated to me how comfortable they were with the software on their handset. Although I was willing to do so, in no case did I have to show, or suggest, how to find the information. Everyone immediately went to the correct menu on their own phone and completed the table. I then asked them to look at the pattern which had emerged and asked did they think it was typical for them. Although many agreed that it was, in some instances respondents suggested that because of some personal (or club) on-going event, the pattern differed from usual. I felt that this was an innovative method of linking the reflection required in interview with a very practical manifestation of use, and intended to examine the quantitative data gathered to see if it yielded any common patterns of use.

My other major piece of data was the secondary information I had at my disposal. The information available on adoption patterns of the mobile phone and its diffusion throughout the population may provide useful background information, but using statistics in this way can often hide patterns or themes of adoption – for instance specific cohorts who might be heavy users may push up the statistics to present a picture which does not reflect the population as a whole. However, when the penetration of the phone in society is almost universal (as we might assume from figures over 100% as pertained in Ireland at the time of research), then they assume a greater validity. These figures on phone penetration, although commonly used, have themselves been questioned. As Sunderland points out, counts of active mobile SIM cards do not exactly reflect the total population served by phones, as:

> … the figure of 100 percent is implausible, since there are some groups that are unlikely to have a mobile phone. Infants, perhaps aged 7 and under, and the elderly, perhaps aged 80 or 85 and over, would seem very much less likely to have their own mobile phone. … Additionally, some of the disabled will be unable to use a mobile phone, some of the very poor cannot afford one and some people simply do not want one, while a few people in hospitals, asylums and in prisons will not be permitted one. … The possible reasons for an individual having more than one SIM card, telephone number or cellphone include: overcoming patchy or poor network

> coverage; avoiding network congestion; saving money by making on-net calls; benefitting from discounted or bundled tariffs; receiving calls or voicemail to an older number; and having separate voice and data network operators. (Sunderland, 2009, pp7-8)

While we accept that these might possibly not be exact figures, when the data is gathered and analysed in a similar fashion, it can certainly be used to set a metric level for comparison between populations.

The other statistical data which are particularly pertinent to this thesis is that on community participation in Ireland. Fortunately, due to interest in this topic by the Irish government, the available information is relatively recent and comprehensive, as described in chapter four.

3.6 Data Analysis

I recorded and transcribed all my interviews. Although I initially considered using a piece of software to help analyse the data, I found that I remembered a lot of the interview information myself, and after having transcribed the recorded interviews, and read over them a few times, I had quite a clear idea of which particular opinions were attributable to each interviewee. I then, using a printed version of the recording, created a (paper based) spreadsheet on which I noted for each interviewee the essentials of their response to each of the 45 main questions I was interested in (a copy of this is in Appendix 4). This response was in the form of a few key words, or a binary YES/NO, or a number, or similar comment. I also included the analysis of the 'Last 10 calls' data on this sheet. When I came to gather my findings and analyse the data, I used this (A1 size) sheet to count similar responses, to look at patterns and to easily cross-reference the data. I also used it to pinpoint any unusual responses, which drew me back to the original interview notes to find a quote or further explore a response. I liked the very tangible nature of this summarising method, and it had the added advantage of drawing me away from the computer, which made me reflect on the data before committing it to words.

I also used a spreadsheet to record the questionnaire responses. Many of the replies here had binary answers, or were easily grouped (a factor I had considered in the design). Although I created this spreadsheet on the computer, I used a printed version to aid my writing and to append comments (a copy of this is in Appendix 5).

When the time came to record my findings (while writing chapters five and six) I regularly went back to the original versions of my interviews and counted from or re-read certain sections. I used the word processing software search facilities to target the question I had asked, and where necessary to extract comments from the text.

I initially had some difficulty amassing and categorising the various different strands of literature necessary to create this thesis as they were from different disciplines. I drew up a map to help me with this, linking themes with each other and with specific papers I had read. This proved a useful tool to clarify the links between the various subjects I covered, and to ensure I hadn't omitted any topic. It is included in Appendix 6.

Chapter 4
The Irish Context

> ... cultural differences show up in the way people perceive their relations with others, but also in the ways they make use of artifacts, furnish their homes and spend their time. It is possible that the use of and values towards ICTs are also governed by these same cultural values, yielding different communication cultures. Thus, examining cultural differences is meaningful if we are to understand the use and adoption of ICTs. (Mante, 2002)

Since this thesis is set in the West of Ireland it is useful to explain some details on the background of the Irish population's engagement with technology and to describe local attitudes to the place of community in everyday life. In doing so it is difficult not to fall into cultural generalities which hide the wide variations in the values and attitudes of those I am attempting to describe, but factors of history, economics, social background and government policy all influence the factors of human-technology interaction and social capital in community life which are being examined in this thesis.

This section firstly looks at the engagement of the Irish population with technology in general and in particular through their experience of it in the workplace. It then traces the rise and penetration of the mobile phone, with emphasis on the factors of talk time and cost (these being areas where the Irish figures stand out from those of their European neighbours). On the issues surrounding community life in Ireland, it examines the metrics on civic engagement and volunteering, and specifically looks

at the sporting community as they are the focus of study. The role of the GAA in Irish life is also described.

4.1 Irish engagement with technology

For the first 40 years of its existence (until the 1960s) the Republic of Ireland was essentially a rural economy, with no major industry, even in urban settlements. Both the physical and telecommunications infrastructure were substantially underdeveloped, and in effect the population's engagement with technology was at a minimum. However, by the end of the 20th century Ireland and the Irish were at the centre of an information economy. This turnabout was in part due to a concerted government policy of encouraging inward investment through a favourable tax environment and promotion of Ireland's young and educated workforce. They also exploited their membership of the European Union to gain grants and support for infrastructure development, and promoted the idea that location of a manufacturing plant within the EU opened up favourable trading opportunities for overseas companies wishing to engage in a global market. Due to such policies, non-agricultural employment grew by 26% between 1980 and 1996 compared with a growth of 7% in the European Union as a whole during the same period (ESRI ,1997). This policy of 'industrialisation by invitation' in effect turned the national economy from an agricultural base to one firmly focused on electronics and information technologies (Roper and Grimes, 2005). The implication of this was that the general population became comfortable with modern ICTs.

4.1.1 The Information Society in Ireland

This economic transformation from an agricultural base to one based on hardware and software production was in effect a forced (and managed) change. Ireland's policy of bypassing an industrial economy through importing information sector jobs was achieved by

> ... employing a comprehensive industrial policy framework to guide societal, industry and governmental behaviour. The adaptive quality of this approach has enabled Ireland to alter its course as it responded to challenges and recognised opportunities on its way to creating its information economy. (Trauth, 2000, p47)

Adaptability is a key issue here – having a population willing to change in order to accommodate innovative needs and work practices was an important factor in developing Ireland's status as a suitable place for investment. The Irish workforce were also willing to embrace whatever technological abilities were needed to engage in a global market place. Included in the government's policies were explicit objectives to educate the workforce in technology in order to feed the emerging need for information-based jobs. This included investment in hardware for schools and promotion of education programmes:

> Education systems must also be restructured so that learning institutions become more responsive to changes in the skills needed by businesses and industries. This is a key to job creation. There are also important responsibilities for each individual if his or her 'employability' is to be maintained and enhanced in the Information Society. (Info Soc, 1996)

Lack of an industrial tradition also possibly made the population open to adapting to newer manufacturing and management approaches in that they could in effect 'leapfrog' older ways of working and were able to adapt to more current American and Japanese business practices where appropriate. This flexibility could also be considered important in their ease of adoption of computer and communications technologies.

The establishment of the large multinational corporations who were world leaders in hardware and software production introduced the population to high technology within an international workplace, and made them comfortable with the terminology and use of these same products. In the International Telecommunications Union (ITU) ICT Development Index (IDI)[31] Ireland jumped from 26th to 18th place worldwide in the period 2002 – 2007 (ITU, 2009). Once Ireland had gained its reputation as a nation at the leading edge of the information

[31] This ranking is based on a number of indicators to determine the access, use and skills with ICTs within each country.

technology industry, the citizens gained confidence in their abilities: in being painted as technocrats, they soon become just that. They were a nation well positioned to embrace mobile phone technology.

4.1.2 Diffusion of the mobile phone in Ireland

The success of the mobile phone in Ireland was not built on a strong historical investment in, or widespread use of, its fixed line counterpart. The Irish were slow to adopt domestic telephones, and the lack of a universal service policy did nothing to increase demand. Early take up levels were low, and by the mid-1970s there were only one in five homes with a telephone. In the following 10 years an increasing social acceptance of the telephone as a necessity rather than a novelty grew, and created a waiting list which reached 100,000 applicants (Flynn and Preston, 1999). Heavy government investment in the 1980s saw a total overhaul of this poor infrastructure and out-dated technology, and the national telecoms company were able to leapfrog technologies and adopt a digital system throughout the country. This was done as part of the policy to attract industry (as already described) rather than to appease a domestic market and, although home users were fed from this supply, it was 1985 before the telephone reached 50% household penetration.

In subsequent years, the government set improvements to the telecommunications system as part of their targets in improving infrastructure. In 1996 they set themselves the goal of placing Ireland in the top quartile of OECD countries for communications infrastructure by reference to standard sectorial indicators as soon as possible. Figure 9 shows the reported improvement of position between 1995 and 1999 as reported in the reports of the government's Information Society committee (InfoSoc, 1999).

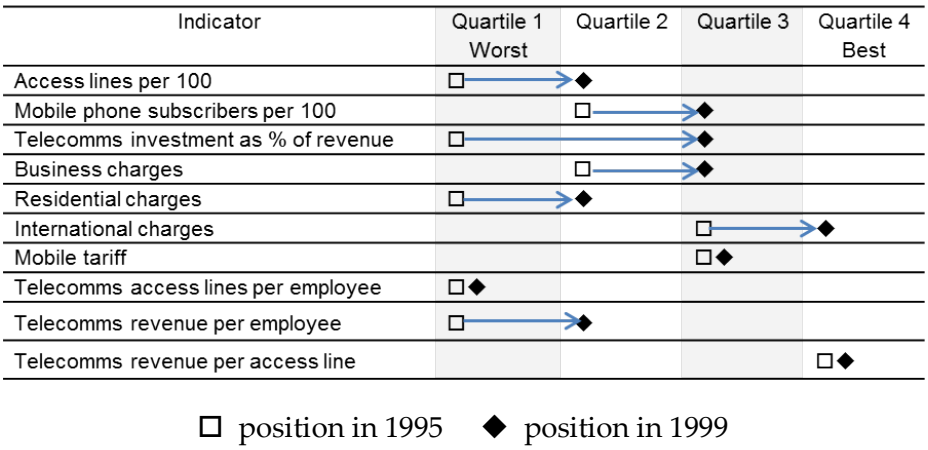

Figure 9. Irelands rating on Key OECD Telecommunications Indicators (InfoSoc, 1999, p14)

Today, household penetration rates for fixed lines are 85%, a figure on par with the rest of Europe (EU, 2007). However, the percentage of calls made from fixed lines is slowly declining, currently given as 51% of the total call volume. This is mainly attributable to internet (VoIP) and mobile substitution (ComReg, 2007). Today 18% of all households rely on mobile services only. This thrust towards easy communications access affected social as well as business interaction and set the population up as being receptive to having universal access to telecommunications in the following years when mobile phone technology became affordable for the general population.

Mobile phone diffusion did not of course suffer from the same problems as its landline counterpart which needed a critical mass of users before take-up was desirable (who wants a phone unless there is someone else to call?). The ability to link into an existing network of telephone users ensured its ease of spread. The peak year for growth was 2000, when penetration rose from 44% of the population in January to 73% in December. This is shown in the graph below of national figures (Figure 10), in which the 'take off' point can clearly be seen.

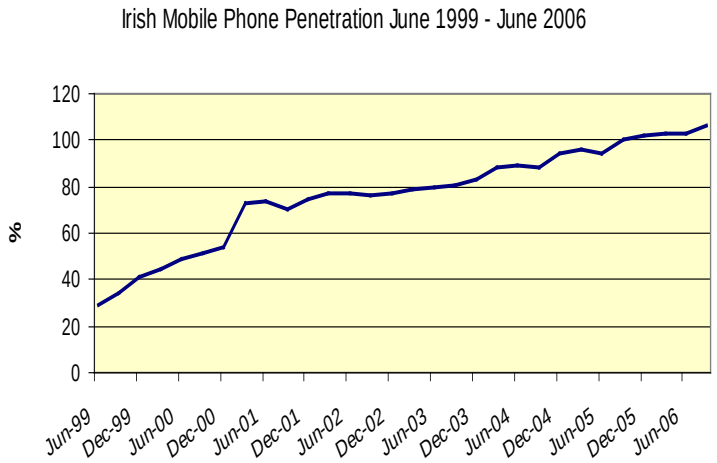

Figure 10. Mobile phone penetration in Ireland June 1999 – June 2006 (source ComReg statistics)[32]

These statistics also mirror figures for the United Kingdom, where mobile phone penetration rates went from 50% to 73% in the same period (Crabtree et al., 2003), and similar patterns are found throughout Europe. This is the stage when the mobile phone was no longer generally considered as a device for the affluent business user, but rather as a communication tool for all. Much of the growth was attributable to the Christmas period when there was increased advertising for all electronic goods traditional at this time coupled with a major sales thrust from the main phone providers. Another factor boosting sales was the offer made to all first year college students in September of these years by the two major Irish banks. They both offered free handsets (or very cheap handsets with pre-paid credit) to any student who opened an account with them, an offer which would have been open to almost 35,500 students each year[33]. All of these factors contribute to this being the period when true commoditisation of the mobile phone as an artefact took place and

[32] The figures provided by ComReg are for the previous quarter. Therefore the December 2000 sales are reflected in the March 2001 statistics. The apparent dip in this graph around the end of 2001 is due to a re-adjustment by the operators in the definition of what constituted an active mobile phone user.

[33] Based on reported statistics from Irish Higher Education Authority for entrants to full-time third level courses 2000.

increased advertising, reduced prices and widespread social acceptability opened it to a wider market. By the time of my survey and initial interviews, penetration into the Irish market had reached 111% (ComReg, 2007).

This period of high penetration of mobile phones occurs in the period of the 'Celtic Tiger'[34], a time of unprecedented economic growth in the country when most sectors of the population had an increase in their disposable income and found the mobile phone a relatively cheap device to purchase for themselves or as a present for loved ones. The increase in GDP at this time also saw the country as a convenient ripe market for consumer goods, so there was much targeting of electronic products into the Irish market. This alignment with GDP fits into the diffusion influences for mobile phones as described in section 2.2.2. Many of the other factors influencing diffusion which are recognised by the literature are also present for the Irish case. Castells et al. (2007) and Kalba (2008) both suggest that countries with a small land mass are at an advantage as setting up the infrastructure is easy, and also that the provision of prepaid costing and a system of 'calling party pays'[35] (CPP) enables a whole population to adopt. Both these and the EU study also suggest positive factors on the supply side: the existence of technological standards to enable interoperability; supportive government policy; existence of a competitive market. All of these factors exist for Ireland which has a land mass of only 180,000 km^2, implements EU standards and has a high profile regulatory body maintaining a consumer interest in the market. Additionally, the CPP model has always been in place in the Irish market. There are two areas where Irish diffusion appears contrary to research findings elsewhere. It is accepted by these studies that rapid mobile

[34] The term was first used in an article by Morgan Stanley in 1994 to refer to Ireland's progressing economic strength. It refers approximately to the years 1995-2008.

[35] In some countries (including early US mobile systems) the receiving party pays for the call. This is seen to inhibit both the caller, as they are imposing a cost on their interlocutor, and the receiver in taking that cost. CPP has proven to be a system more conducive to phone adoption and use.

phone diffusion occurs when there has been a similar pattern for fixed line telephones, and this is not true for Ireland[36]. The second contrary finding is where Kalba suggests that countries with higher older populations are quicker to adopt as this section of the population will have the disposable income to support both initial and ongoing costs. In Ireland, it is a younger population who seem to be pushing for adoption, with the older lagging behind. While possibly unusual on a world scale, this pattern is evident in a number of European countries as shown in Ling's many studies.

Of specific relevance for mobile phone adoption in Ireland was that its rise in popularity world-wide coincided with a new-found wealth and individuals had the disposable income to spend on what in a more difficult economic climate might have appeared a luxury. There was also at the time a rise in spending on travel, and those who had previously not been able to afford expensive holidays were taking the opportunity to see the world (Mottiar and Quinn, 2006). Being away from home and having the ability to stay in touch is a recognised advantage of the mobile phone and the corollary is also true in that owning a phone may free one to travel. This is true not only for holiday travel, but even for small local journeys, and during this time people were generally becoming more mobile in their patterns of daily life and feeling less tied to their home place. The economic surge experienced in the country at this time also meant that everyday life had become busier, with new opportunities for both work and leisure. Time, in effect, became more precious and the belief that the mobile phone could 'save' time was another factor to encourage new users.

The phone producers certainly saw a potential market in a population of rising wealth, and the people were keen to engage. They had accepted the widespread

[36] Fixed line phones were slow to be adopted in Ireland, as described earlier.

media claims that the Irish were at the forefront of technology-production, and had a high confidence in their ability to take on something new. This was of course helped by the nature of the device itself, in particular the fact that it is small and portable, making it unobtrusive for those who wished to keep it so, yet a fashionable good for those wish to flaunt it. Overall, in an environment where money was available for discretionary spending, technology use was not an obstacle and there was a worldwide 'trend' towards mobile phone use, there is no reason why the Irish would not become adopters.

Not only did the Irish population take to mobile phone ownership, they also became high consumers of the service. Figures for the fourth quarter 2006 (the period under survey) showed 2 billion minutes talk time and 1.64 billion SMS messages sent[37]. These figures display a steady rise, being an 11% and 14% increase on the previous quarter figures. While similar patterns were happening elsewhere, the one area where the Irish statistics are remarkable is in the revenue generated by this use, as is shown in Figure 11 which displays the cost of ownership throughout Europe during the period of my initial interviews in 2006.

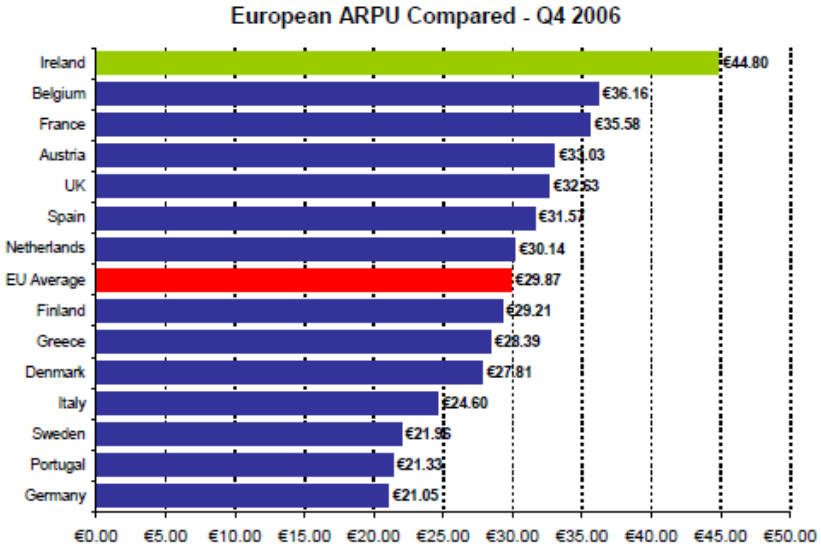

Figure 11. APRU Quarter 4, 2006 (ComReg, 2007)

[37] These SMS statistics translate to 117 messages per subscriber per month.

As can be seen from the graph, the average revenue per user (ARPU) in Ireland at this time was €44.80 per month, well above the European average of €29.87. It is difficult to ascertain if this is due to high minutes of use (MoU), or whether the Irish service providers were charging more for their service in a market which was experiencing a surplus wealth. At the time, figures were not released to examine this, but the communications regulator made it a subsequent requirement, and more recent reports show that the French actually have a slightly higher MoU, with a lower ARPU. The Irish population are obviously paying more than other European citizens for a similar service, and are willing to do so.

Introduction of the smartphone saw an initial slow response in Ireland, but by the end of 2010 it was the new phone of choice. By May 2011 over 63% of the population had smartphones (Amarach, 2011) and by March 2013 this had risen to 72% (ComReg, 2013). Use of regular services (voice calls and SMS) have levelled out and the MI is widely used. This is evidenced in a survey carried out in May 2011 when 34% of users stated that they would surf the web on their smartphone every day, even when there is a PC or laptop nearby (Amarach, 2011). The same survey also reports that there is widespread access to social networks through smartphones, with 83% of users being on Facebook and 25% using Twitter. In common with worldwide figures, the cost of mobile usage has decreased, although the Irish are still spending more than most – with an average APRU of €29.00 per month, compared with and EU average of €15.58 (Statistica/ ComReg, 2013)

4.2 Community life in Ireland

Ireland did not go through the shift from an agricultural to an industrial based society at the same time as the rest of Europe, nor did it follow Tönnies perceived evolutionary path from *gemeinschaft* to *gesellschaft* as described in section 2.3.1. In fact, the archetypal picture of local Irish community is still a very traditional one, based on the more positive aspects of cooperation and solidarity, and community is a popular concept, generally interpreted as reflecting a desirable form of social organisation. This is enhanced by the attitude of the state in favouring a locally organised response to social problems such as poverty and crime (Tovey and Share 2003).

During its time as a British colony there was little industrial development in the country, and in the years immediately after the foundation of the state 'real' Ireland was viewed as a rural place:

> In the early decades of independence the culture of rural Ireland was elevated to a position of prestige and symbolic importance in the new society. Politicians, church leaders, writers, artists and film-makers agreed that the real Ireland was rural Ireland, while urban life and culture was often regarded with suspicion as foreign to Irish ways. But since the 1960s it has been urban culture that has increasingly established itself as the expression of the real (modern) Ireland, while the rural has been labelled backward and traditional. (Tovey and Share 2003, p345)

In recent decades the country has seen a shift towards a modern landscape for both rural and urban life and while differences exist, neither region lays claim to being distinctly more Irish than the other.

There are various definitions used as to what constitutes a rural community, as described in 2.1.6. Is it one which is geographically isolated, or one which is economically tied to agriculture, or one defined by population density? Ireland is small in size and with an overall low population density, which means that it has

few very large settlements [38] and no place is extremely remote[39]. The rural/urban divide is therefore somewhat conscribed and the Central Statistics Office uses a definition of rural as being outside a settlement with a population over 1,500 (CSO, 2012). Current statistics show 38% of the population living in such areas. The urban area of comparison in this thesis is Galway city, the third largest conurbation in the state, with a population of 75,500; the rural area is in Galway county, 45 kilometres from the city and within 10 kilometres of the nearest small town (population 4,000).

The classic description of traditional Irish community is still considered to be that described in the work of US sociologists Arensberg and Kimball in west County Clare in the 1930s (Arensberg and Kimball, 1940). This describes a rural-based, relatively harmonious lifestyle with feelings of mutual identification, mutual dependence and collective solidarity, very much in the mode of Tönnie's *gemeinschaft*. The moves towards a more industrial economic base in recent years have seen a population shift towards urban areas, and later studies describe a changed experience: much of the rural population now commute to urban areas for work and live a lifestyle very similar to that of their urban counterparts (Brody, 1986; Curtin, 1988). Current opportunities for personal choice and better transport and communication links mean that the Irish now live what Peace describes as a 'richly diverse and heterogeneous economic and political landscape, a multiplicity of spaces and places in which the proliferation of cultural difference is the order of the day' (Peace, 2001, p7). This does not, however, mean lack of attachment to their local area as most people have strong links to the place where they were reared, or

[38] There are five urban settlements in Ireland classified as 'cities': Cork, Dublin, Galway, Limerick and Waterford. These have populations ranging from 50,000 to 1 million. By way of comparison, Denmark has a similar population to Ireland and has 13 cities over 50,000 people.

[39] There are few areas of the country which are more than 50 kilometres from a settlement, which means the more extreme forms of isolation as found in parts of Canada or Australia are not present.

even in some cases that of their parents. There has also been some polarisation in the country between east and west. The spread of development has not been even, and the economic success experienced in the Dublin region (in the east) has not been replicated to the same degree throughout the country:

> Territorial boundaries may be redrawn in the process of development, but do not necessarily disappear: people continue to see their own locality as a basis for collective identification, even collective action. 'Glocalisation' is a term commonly used to emphasise how globalisation processes give now importance to the local. (Tovey, Share and Corocan, 2007, p113)

In some ways, the West of Ireland region in which this research is situated, while being very much part of a globalised, technologically-aware society, still has a strong attachment to the older forms of community and an interest in promoting local issues.

4.2.1 Community development and policy

There is no doubt that the urge towards community in Ireland is strong. Through time this has been expressed in different forms: oppositional[40] (opposing state plans) or integrationist (working with the state on self-help projects through supported cooperatives and local initiatives). The government have strongly encouraged the latter approach and have built on it as a key dimension of their development policy. Today the concept of 'social partnership' is an accepted political ideology in Ireland and is seen as a means of activating local consensus and instituting the democratic process. This explicitly includes locally formed community groups:

> Social partnership has enjoyed strong cross-party political support, and a fourth pillar, of non-governmental or voluntary organisations, has been added to the original

[40] Although not always very quick to mass on the streets as a form of popular protest, there have been a number of strident examples of local protest which have opposed government plans for a local area. An example of this is the long-running 'Shell-to-Sea' campaign which opposes the siting of a gas pipe in north Mayo.

> tripartite representation of employers, trade unions and farmers ... It was perhaps inevitable that partnership would also be applied to overcome spatial inequality. The state has come to see involvement of the local community in development as the best way to tackle the concentrated pockets of unemployment and poverty that have persisted despite overall economic growth. (Tovey and Share, 2003, p118)

While this strategy might be seen as a revival of localism as a focus in social organisation, it is in effect a national policy, and there has not been a devolution of power to reflect the efforts of regional initiatives.

Local Development Partnerships These draw their membership from a wide range of interests. By way of a voluntary board of directors they draw up a local plan for integrated social and economic development that must be approved by central government in order to receive funding.
Local Enterprise and Employment Partnerships Membership is determined by central government, but includes local authority representatives, public enterprise agencies and public and community sector representatives. They are chaired by the manager of the relevant local authority and again must have their local development plan approved by central government.
Local Service Partnerships Co-ordinating structures for the delivery of specific social services such as training and employment, drug-use reduction, or childcare to a variety of local users. They are often constituted as a subcommittee of a Local Development Partnership.
Community Development Organisations Receive funding for specific – generally neighbourhood-bases – projects, from diverse sources including local supporters, lottery money and private trusts. Usually managed by a voluntary management committee.
Urban Regeneration Partnerships Relatively new bodies that have a distinctive focus on physical regeneration as well as social and economic improvement in disadvantages urban areas. Particularly concerned with refurbishment and management of local authority housing estates. Local authority representatives again play a strong role in their management and activities.

Figure 12. Local Partnerships in Ireland (Tovey and Share, 2003, p119)

The various forms of local partnership in Ireland at present are shown in Figure 12. The sports groups surveyed in this thesis would probably fall under the *Community Development Organisations* category in that they are in receipt of both support from the Department of Sport and funds for specific projects from the State Lottery Fund.

They also are under the umbrella of the parent organisation the Gaelic Athletic Association (as described in 4.2.3) which injects funds from a central source.

4.2.2. 'Bowling Alone' in Ireland

Having established a position which views that the functioning of a healthy society is synonymous with an active local community life, the Irish government were particularly concerned when the *Bowling Alone* work of Robert Putnam was originally published. It was felt that in the period of new-found wealth of the 'Celtic Tiger' citizens were no longer contributing to civic engagement and volunteering in the numbers that they did previously, a situation which might upset the balance of social development in the country as a whole. There were also concerns that as Ireland had in recent years experienced an influx of people from other countries[41], it was important to build a harmonious multi-cultural society and that this was based on a healthy community life.

Robert Putnam himself was brought in to advise the then Taoiseach (Prime Minister) who set up a Taskforce on Active Citizenship in 2006 with the purpose of carrying out public consultation and making recommendations on a way forward to solve the 'problems' posed by Putnam. The Taskforce's initial report established the perceptions in the country at the time:

> … some [social, economic and cultural] changes are less welcome, particularly those that may have eroded aspects of community spirit and human well-being. For example, concerns exist about the level of inequality in Irish society, and its impact on solidarity between individuals and communities. It is not obvious that we are, today, more caring, engaged, friendly, relaxed and happier than we were in the recent past. The evidence is mixed … (Taskforce, 2007a, p11)

[41] The economic rise and provision of highly-paid jobs for Irish citizens saw immigrants coming into the country for the first time. These were mainly to fill lower-paid jobs, chiefly in the construction sector which had undergone a boom period.

In order to establish the scope of their work, the first activity of the Taskforce was to establish the statistical evidence of community participation in Ireland. They undertook extensive consultations, ran seminars to gather qualitative comments, and administered a survey which they could use comparatively with a similar survey four years previously. Contrary to expectations, their findings indicated that there was an *increase* in the level of social engagement throughout the country. Statistics showed that in the years 2002 to 2006, the level of 'regular volunteering' rose from 17.1% to 23.1%, while 'active community involvement'[42] went up from 21.7% to 29.0% (Taskforce, 2007c, p9). In light of the fact that this Taskforce, and consequently the research, was based on Putnam's premise of community life as a dying form, the evidence was seen as surprising. The Taskforce recognised that these figures were contrary to popular expectation, but defended the rigour of their sampling and survey conditions, concluding that 'The indications are that levels of volunteering, active community membership and civic-political engagement have increased somewhat over the last 4 years.' (Taskforce, 2007c, p5)[43].

However, the picture on community action in Ireland evidenced by these statistics is not all positive. The participation levels found are, while not declining, low when compared with other countries. For instance, 28.4% of the population overall do unpaid work for at least one organisation, while the comparative figure for the UK is 43.1%. These statistics, coupled with reports from within that organisers of local

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[42] Regular volunteering is defined as those who 'undertook any type of unpaid regular voluntary activity or service outside the home or workplace'; active community engagement is those who were 'actively involved in any type of voluntary or community group in the last 12 months'. (Taskforce, 2007c)

[43] The changes displayed are somewhat uneven. The types of groups experiencing the highest rise are community and residents associations (up from 9.2% to 14.3%), voluntary groups on health and education (up from 3.9% to 4.7% and 0.7% to 4.3% respectively) and youth work (up from 3.0% to 4.3%). The groups which do show a marked decrease include religious or church organisations (down from 20.2% to 10.9%) and professional organisations (down from 3.4% to 0.2%). Although the most popular type of communal activity, sports clubs too are experiencing a decline (down from 26.4% to 24.8%).

community groups find it much harder to get volunteers than in the past, formed the basis for a number of recommendations to government to stimulate and encourage more active participation in community action by the population as a whole. These proposals were to be instigated for the years 2008 -2011, with a steering committee overseeing progress[44]. There is no mention of ICTs in these recommendations.

The low levels of participation were explored by the Taskforce in the context of a changing Irish lifestyle, in particular the factor of increased commuting time. Putnam would certainly deem travelling to work and suburban life in general as counter-productive when he states ' The car and the commute … are demonstrably bad for community life' and his findings suggest that ' … increasing commuting times among the residents of a community lowers average levels of civic involvement even among non-commuters' (Putnam, 2000, p213) . Despite their concerns, the Taskforce has not found this to be the case in Ireland. House prices had driven much of the population out of cities into cheaper suburban (and rural) homes during this period, and between 2002 and 2006 the average commuting time for those surveyed had increased from 61 minutes to 70 minutes. In the same period, the total volunteering rate for those in employment went up (from 20.3% to 27%), and no direct relationship can be seen between the length of travel to work and the level of volunteering within the population.

Also evidenced by the statistics is a notably uneven distribution in the sections of population who are participating. While it is difficult to draw general conclusions from such data, overall indications are that active engagement in community organisations and volunteering was found to be highest among those with higher

[44] In 2010, the Office of Active Citizenship set up under these recommendations was closed as a part of economic cuts, even though its annual budget was minimal (approximately €56,000 per year).

education, those aged in their 40s, and the employed. The findings on education mirror what was found in other studies. For example, in his review of two cross-country micro datasets, Denny states: 'I find a consistently positive effect of years of education on participation [in voluntary and community activities and organisations] with the marginal effect of an additional year being around 2 or 3% for most countries' (Denny, 2003 , p1).

The figures of participation by type of settlement are also uneven, most notably displayed in the fact that in 2006, 38.4% of those living in rural areas (regions of open countryside) participate in community life, compared to only 22.2% of those living in Dublin city and county (as shown in Figure 13). This would feed the idea that the more remote a location people live in, the more they need to make an effort to meet others, and local community action provides a means and place to do this.

	Volunteered		Actively engaged in community	
	2002	**2006**	**2002**	**2006**
Open countryside	19.8	29.8	26.7	38.4
Villages (less than 1,500 inhabitants)	21.7	23.3	35.0	28.2
Small towns (1,000-4,999 inhabitants)	21.8	21.6	21.6	37.4
Large towns (5,000-9,999 inhabitants)	24.6	29.1	23.0	13.9
Cities or large towns (10,000 or more inhabitants)*	10.6	16.9	12.0	22.9
Dublin City and County	15.3	16.7	21.4	22.2
All respondents	17.1	23.1	21.7	29.0

*excluding Dublin All figures are percentages

Figure 13. Trends in volunteering and community engagement by size of location 2002 – 2006 (Taskforce, 2007c)

Since one of the groups examined in this research is rural, and one urban, on the basis of these statistics it might be expected that the rural group would be the more vibrant and active of the two.

The Taskforce also produced statistics of the split of community engagement by organisation type (Figure 14). These show that, while displaying a slight decline during the period, participation in sports clubs is by far the most popular activity.

Organisational type	2002	2006
Sports	26.4	24.8
Community/Residents' Association	9.2	14.3
Social welfare services (older people, disability, deprived)	10.8	12.2
Religious or Church organisations	20.2	10.9
Voluntary organisations on health	3.9	4.7
Education	0.7	4.3
Youth work	3.9	4.3
Other Groups	3.0	4.3
Schools/Parents associations/Board of Management	5.1	4.3
Recreation	3.2	3.0
Women's groups	1.8	2.4
Political parties/groups	2.1	2.4
Third World/human rights	1.1	1.9
Trade Unions	1.6	1.7
Arts, culture, music	2.1	1.5
Local community action (poverty, employment, housing, racial equality)	1.1	0.9
Professional associations	3.4	0.2
Conservation, environment, ecology, animal rights	0.2	0.2
Missing/Don't know	0.0	1.7
Total	100	100

Percentage distribution of organisations mentioned by adults who reported being actively engaged in community and voluntary organisations in the previous 12 months

Figure 14. Active Community Engagement by Organisational Type, 2002-2006 (Taskforce, 2007c)

There is no doubt that both active and passive participation in sports is high in Ireland and sport plays a big part in Irish life:

> Sport matters to the Irish people, and in particular, to Irish men. They play it, read about it, watch it and speak about it to a degree that, whilst by no means unique, certainly suggest that it is an aspect of Irish cultural life deserving of notice. (Bairner, 2005, p11)

Using slightly different metrics from the Taskforce, Delaney and Fahey (2005) report that 30% of the Irish population are members of sports/fitness clubs (40% male, 20% female), and that 15% of adults (18% male, 12% female) have voluntary involvement in sport. Their report was commissioned to investigate the economic and social value of sport to Ireland, and in its conclusions, it acknowledges that those who make social contact through sporting activities often meet up outside the club. They also acknowledge how this might affect the creation of social capital:

> Such socialising has been placed on the heart of modern theories of social capital formation and it is clear that sport has a significant role in promoting the type of low-level relationship building and network formation implicit in the social capital approach. (Delaney and Fahey, 2005, p69)

The Taskforce report concludes with policy recommendations which highlight the links between the social aspects of sports club membership and social capital development, and suggest that funding should be available to encourage supporters and volunteers as well as active participants of the sport.

The Taskforce also investigated informal socialising in Ireland. Despite the findings of low participation in voluntary organisations, the evidence is that the Irish score high in terms of participating in informal social networks. Figure 15 shows the results of a 2004 OECD survey which asked 'How often do you spend time with friends, or with colleagues from work, or with people from church, sport/cultural groups?' (Inglehart et al., 2004)

	Rarely	Never
Japan	15.3	1.7
Mexico	14.1	4.7
Czech Republic	10.0	1.2
Portugal	9.6	1.4
France	8.1	1.5
Italy	7.7	1.6
Austria	7.6	1.0
Korea	7.5	1.3
Finland	7.4	0.5
Spain	6.8	1.5
Canada	5.8	0.8
Iceland	5.5	0.2
Belgium	5.1	1.7
Great Britain	5.0	1.2
Greece	3.7	0.2
Germany	3.5	0.5
Denmark	3.3	0.4
United States	3.1	0.6
Ireland	2.9	1.0
Netherlands	2.0	0.3
OECD average	6.7	1.2

Figure 15. Percentage of respondents in OECD member countries who rarely or never spend time with friends, colleagues, or others in social groups. (Inglehart et al., 2004)

Coming at the bottom of this table suggests that the Irish, even those who do not participate in formal organisations, have an active social life, possibly 'hanging out' with friends in informal groups. This may not necessarily reflect a healthy society, as in Ireland the public house acts as a 'third place' (alongside home and the workplace) where such gatherings might occur, and a culture of alcohol consumption can bring about its own societal problems.

4.2.3 The role of the GAA in Irish community life

The GAA (the Irish sporting organisation studied in this thesis) is over 100 years old, and is the largest sports body in Ireland, with more than 2,500 clubs on the island. Although the association have a sophisticated and well-structured

administration body in their Dublin headquarters, local clubs have autonomy over their own activities. Each club is run as a voluntary initiative which usually draws its membership from the local district, and they are particularly strong in rural areas. The original catchment area of each club was considered to be the local parish, but in a recent strategic review of its activities (originated in an attempt to engage with its role in a changing Ireland) this has been redefined as 'the local community' (GAA, 2002). The GAA acknowledge the term community to be a self-defined unit, but set certain caveats on club size. In recognition of increasing urbanisation, clubs must serve a catchment area less than 25,000 in an urban area and less than 5,000 in small towns and rural areas (point 92).

There are two main games played, hurling and Gaelic football, and competitions are organised between clubs in each of the 32 counties, with progression to a country-wide club competition. Each county also fields a team, with members drawn from the clubs within it. The level of interest in inter-county competitions is very high and provides a talking point for the whole country at competition peak times. The sports are also encouraged through a number of active schools competitions, and most clubs field a number of children's teams. Considering that these are non-professional games, the levels of commitment put in by players often matches those of their semi-pro peers in other sports. The sports also attract players and members from all sections of the population, with 40% of members from either the skilled or semi-skilled manual class of workers, and 33% from the higher or lower professional classes. Equally there is a wide spread of ages, with 43% being over 40 years of age, and 28% under 25 (Delaney and Fahey, 2005).

During the main playing season, April through to September, teams play at least once per week, and clubs need to have regular communications with their players on activities such as fixtures, training and results. Since the nature of the sport is that people are away from their home base while participating, mobile phone use

would appear to have many advantages to both individual members and the club as an organisation.

Members may have come to the GAA clubs for a variety of reasons: for instance players join because they want to stay fit, supporters come to see family members in action, administrators because they want to contribute to a communal enterprise. For many, club membership offers a complete social environment in that it provides a hobby to occupy their spare time and friends to enjoy it with, and club matches dictate their schedules. Despite their motivation, all feel their allegiance is to the club, the group as a whole, and they hold this affinity even if their initial reason for joining is no longer present. This is fed through the GAA parent body as is seen in the advertising poster as shown in Figure 16. The slogan here, 'Club is Family' implies that very close ties are to be found in affinity with a local club[45]. Also included is a statement that the sponsor (AIB, one of the main Irish banks) is 'supporting clubs, supporting communities', suggesting that the club *is* the community. Other posters in the same set of promotional material link individuals with place, using catchphrases such as 'You don't choose your club, you are born to it', with the implication that your locality of birth dictates your allegiance for life, and 'The GAA club is as much part of your identity as DNA or your fingerprints', implying deep (and perhaps inevitable) ties and connections.

[45] The AIB also run a website with this tag: www.clubisfamily.ie (accessed 8th July 2013)

Figure 16. Poster promoting GAA games by a sponsoring bank

These images of the GAA player and supporter are aimed at evoking a loyalty and identification with the organisation which is seemingly inevitable, so much so that the bank in question wish to align themselves to it and also gain loyal customers. Although a marketing technique, the statements do conjure up a rather comforting image of belonging. The GAA does have a strong pull with many people and is the focus of much of their lives. As Cronin states:

> To understand the GAA and Gaelic games is to understand the sociability of the Gaelic crowd, be it hurling or football. The games induce a great feeling of fraternity though a combined passion, a common language, an enjoyment of physical endeavour, of a pint after the match and of friendly rivalry. (Cronin, 1999, p72).

Such calls hark back to the old forms of traditional community based on a *geimenschaft* model, and these may also be the types of place where social capital thrives.

In its 2002 review of the association's activities[46] the GAA emphasises an inclusive approach to community, stating that the club should 'construe its primary target as 'the whole' family' rather than 'the individual player' and should strive for family

[46] The GAA circulated 508 major contributors to the organisation with an initial questionnaire (218 responses). They then carried out 100 interviews in each of the 32 counties (200 in Dublin).

involvement in all its activities' (GAA, 2002, point100). Most clubs achieve this objective of being an outlet for all the family. Although focused around the games, they usually have a clubhouse where evening classes and social events are held, and every club has a strong commitment to providing playing facilities for the young. The involvement of children in the club often commits them for life (ensuring the club's survival) and also brings with it the associated support of a whole family circle. In more rural areas, the club often provides the only local focus to meet and socialise and thus fulfils a wider social function. For example, the rural club in which the interviews took place fields teams at eight different levels, the youngest being 8-10 year olds.

It must be acknowledged here that active participation in sport does not always feed a harmonious society or contribute to social capital. Sport can foster social tension, and the tribal following of a particular club can encourage disharmony and violence. Sport is also not always egalitarian in its adoption – it is more likely to be used by men than by women, by the educated and professionals, and the young rather than the old. Jarvie highlights this when he states that it is unrealistic to expect sport to be totally responsible for sustaining a sense of community or reinforcing social capital:

> ... it is the potential contribution that sport makes to a civil society, the space between the state and the individual, that provides sport with the opportunity to promote a communitarian philosophy based on mutuality and obligations rather than individualism and some ideological notion of sport for all. (Jarvie, 2006, p337)

The GAA sports have not seen the extreme (and more negative) aspects of supporter behaviour evident in some other team games. Within the GAA, both participants and supporters have a positive attitude to the sport as a whole, not just their own team. At a match, supporters of the opposing team will shake your hand when your team beats theirs. They will also engage with you about the merits of a particular

player, despite which team they are playing for, or discuss some rule change or dominance of the league by another[47]. In ways participating in a GAA club can act to feed both the bridging and bonding forms of social capital defined earlier. It bridges society as it is recognised in bringing together people of different politics, professions, and income groups[48], and it bonds them to their local area. By their very membership of the club, and the voluntary nature of their contribution, players and club administrators are engaged in generating social capital.

[47] That is not to say that all GAA followers are paragons of perfect sporting behaviour – there are often disagreements over strongly held views, and occasionally violence on the pitch, but the organisation as a whole works hard to achieve harmony, and disassociates itself from any action that reflects poorly on the sporting aspects of the game.

[48] 'The GAA … has a wide social class spread in its membership: while 40 per cent of its members are from either the skilled or semi-skilled manual classes, 33 per cent are from the higher or lower professional classes.' (Delaney and Fahey, 2005, p38)

Chapter 5.
My phone in my pocket: personal use

As described in section 2.2, the mobile phone has multiple meanings to its owners. It is a medium through which they can reach out to their social circle and as such it can engender feelings of security. It is also something they wear, which can reflect their self image as much as their clothing or hairstyle, and it is something which they use and so reflects their comfort with technology. Most people carry their phone with them no matter where they go and consider it part of the essentials (along with keys and money) which they need to conduct their lives. A person's attitude to their mobile phone can indicate quite a bit about their lifestyle choices and those of the circles in which they move. This section reports on my research findings on these aspects of ownership through which I might gain an insight into our relationship with technology per se.

At the time of my study the mobile phone was a device which was becoming accessible to everyone in the population, not just the rich or the tech-savvy. It is of particular interest to explore how users learnt to own and exploit the functionality

of the phone, and find a place for it in their everyday lives. To do this I am using the framework of domestication (Silverstone & Haddon, 1996) as described in section 2.1.4 to map a path through the adoption and integration process. This approach has been applied to mobile phone use in a number of previous studies (e.g. Berker et al., 2006), and these are useful in providing a form of benchmarking against which the Irish (and sports club) situation can be placed. In this chapter I report the evidence amassed by both the secondary data available and my own interviews and survey, through the (overlapping) steps of consumption: appropriation, objectification, incorporation and conversion.

I first look at the consumption patterns of the Irish population as a whole, and then the responses of the club members in interview and survey as to their reasons for and methods of appropriation. Since this (purchase) is an exercise which they have to repeat every few years I found that many had opinions on their most recent choice of both handset and tariff, and also about what they might do in future (re-appropriations). I then asked about their attitudes to the phone and its place in their lives, when they use it, whom they call with it, and for what purpose. I asked about how they felt its use may have changed their circle of friends and the pattern of their lives, and then specifically what the effects of its use were within the club. These aspects all cover the objectification and incorporation phases of domestication. Based on these conversations, I also include a piece on perceived obstacles for users and the tactics they might have employed to overcome these.

In all interview quotes I include the gender, age band and club function of the respondent. Many hold more than one function (e.g. player and manager) and in this instance I prioritise administration post, then player, then supporter. I carried out 21 interviews and 53 surveys.
The information in this chapter refers mainly to my initial interviews in 2006. Follow-up interviews focused on the impacts of smartphones on the community group rather than on the person, which is the emphasis in this chapter.

5.1 Mobile phone consumption

Phone consumption links with the earlier design phase through commodification :

... the process through which objects and technologies emerge in a public space of exchange values and in a market place of competing images and functional claims and counterclaims. (Silverstone and Haddon, 1996, p45).

The mobile telephone had universal coverage in Ireland at the time of my initial interviews, with the equivalent of 111% of the population having an active SIM card (Com Reg, 2007). Within both clubs, none of those interviewed could identify any of their circle who did not carry a mobile. Figure 17 shows the method of acquisition of their phone by the 21 interviewees, and the year in which it was acquired.

YEAR BOUGHT	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Bought for self	-	-	-	1	2	2	2	-	1	-	-	-
Gift	1	-	3	1	3	1	1	-	-	-	-	-
Hand down	-	-	-	-	1	1	-	1	-	-	-	-
TOTAL	1	-	3	2	6	4	3	1	1	-	-	-

Figure 17. Interviewee phone acquisition patterns by method and year

As can be seen from these figures, most of the interviewees received their phones during the years 1997 to 2001. This matches the national pattern, where mobile phone penetration reached its peak during 2000 and the commodification of mobile phones for social use was well established. The increasing ubiquity of the phone during this period is reflected in that several respondents mentioned that they got their phone then because 'everyone had one'. This was not (just) a fashion decision: the phone was also now cheap enough, easy to operate and with a well-understood service model which meant it could appeal to all. Mobile phones had at this point reached critical mass, the point where potential subscribers could see it being used all around them, and could deem it useful to own a handset too. There was also peer group pressure: many existing users had the expectation that everyone could (or should) be contactable by mobile, casting those with only a fixed line as awkward

contacts. In fact, those not having a phone were at risk of missing out on social events, especially those which were called spontaneously. Buying a mobile phone was in effect the price of membership to an always-available social network.

One interviewee (who bought his phone in 2000) described the drive for mobile phone ownership during this period as a 'change in culture' as there was a heightened awareness of the desire to be in 'perpetual contact'. He explains this experience and then, having established that we changed in our ability and desire for a personal phone, he justifies his own purchase:

…you always have contact, someone can always contact you. I suppose there is security and comfort in it. Obviously it wasn't an issue, when there wasn't mobile phones, but as things go on ... As I said, because I spend a couple of hours, two and a half hours, in the car every day, without a mobile I couldn't be contacted. In the case of a breakdown or anything else, you know... (male, age 35-45, club treasurer)

Respondents to the survey also identified with this changed desire to be in contact. Of the 47 persons who responded to the question 'Why did you first get a mobile phone?' 23 (49%) either said they bought it to keep in touch with friends (19 responses), or because their friends already had one (4 responses). The next largest category (10, 21%) said they had got the phone as a gift, although this might also be construed as being part of the time when they became popular and seemingly ubiquitous. Only 9 respondents (19%) had got their phone originally for work. Other responses include for safety (3), they like gadgets (1) and that the phone was free (1).

Because of its rise in popularity, and due to its competitive price, the mobile phone was a suitable object to be given as a gift, and as already mentioned sales reached their peak during the Christmas period 2000, probably for this reason. The majority of the phones (10/21) owned by the interviewees were gifted. Although some were

bought because the recipient was desiring one, or their friends were getting phones (possibly parents buying for teenagers), 3 respondents reported that the receipt of the phone as a gift was a complete surprise, and they had not envisaged themselves at the time as a mobile user. This is quite contrary to the experience of the early adopters as examined in Ling's paper of 1999 where respondents had objectified the device by placing it within their personal context even before they had made their purchase (Ling, 1999b). In fact these surprised recipients would never have engaged in the *imagination* stage of domestication, and their objectification would have therefore taken some time to construct after purchase. Since the majority of the population are now established users, there is no longer any gifting taking place (at least among the adult population), except perhaps for recycling of handsets when one upgrades to a more sophisticated model or as a temporary measure when a phone is lost or stolen.

Other methods of acquiring a phone include the 'handing down' of an old set. This practice took place for a few years before the devices were so ubiquitous. Buying an early handset was expensive, and in an effort to encourage others, early adopters often passed their 'old' handset to someone else (often a sibling or spouse) when their service carrier offered an upgrade. This offered the recipients a cheap entry into the market, and they become mobile users almost by default, although once caught into the process soon established themselves as users by making their own decisions on payment options and future upgrades.

There was a distinct gender spilt among those who had purchased their first phone themselves. Of the 8 women interviewed, only one had bought the phone herself, whereas over half the 13 men interviewed had done so. This bias concurs with Ling's study in 1999 on ownership within a family where he found that 81% of fathers but only 56% of mothers owned a mobile (Ling, 1999a). It has been recognised too in other studies (e.g. Castells et al., 2007), and the prevailing consensus is that although men were first to buy their own phones, with universal

penetration gender purchasing has now equalised. No difference was found in purchase patterns between the urban and rural dwellers.

5.2 Appropriation and re-appropriation

The appropriation phase of technology ownership is where it leaves the commercial world and enters our sphere of objects, to be owned by its purchaser. At this stage, we become a mobile phone user and undergo some changes in our practices to become familiar with it as an object and enact its functionality. I investigated appropriation by first asking how owners picked up the skills to use their phone and settled into being owners. Most of those interviewed acquired their first handsets during a period of high marketing and promotion, when there were prominent images and promises of what mobiles could offer on every newsstand and television. Through time, they are able to assess whether their own phone-in-use lives up to their expectations, and also what its limitations might be. In this way they can form the choices they might make in a subsequent purchase, a re-appropriation.

When asked how they became comfortable with their handsets, none of the interviewees admitted to reading a manual, but responded that they had 'just figured it out' or 'played with it'. While it is true that most of the population would be familiar with using a fixed line phone, and the sets are designed to be intuitive, first encountering a mobile phone can be daunting for some, as unlike fixed line phones they have an operating system and also the facility to text. Only 4 people admitted that they were shown how to use features by someone else. In fact the 3 oldest interviewees were all shown how to use it by their children, and one of these has subsequently passed on the knowledge gained to her peers:

> I'd say it took me a while to do the text messaging. And I'd say it took me more than a year, maybe even two years, to do that predictive text messaging. And I learnt that because my son taught me how to do it. He thought I was really ridiculous doing the old pressing button thing, and I should know this. So then I taught some of my friends. I was very proud of myself [laughs]. (female, age 45-55, team trainer)

Although all the interviewees have been mobile users for quite some time (at least 3 years at the time of interview), their mobile phone buying days are far from

finished. Questioning what they might want from a new model and their choices over both the artefact and how they might pay for it gives insight into both purchase and appropriation. For those who had received their phone as a gift, buying a replacement phone was their first introduction to the choices available to them in the marketplace.

Mobile phones have quite a short lifetime for a consumer good, with all the Irish mobile carriers offering upgrades after purchase. These usually comprise offers of reduced costs on state-of-the-art handsets, and for pre-pay clients include free credit to a limit often exceeding the cost of the handset. They represent good value on current market prices, but have the added clause for those who are post-pay of tying them into their contract for a further year. The improvements in technology, provision of smaller, neater and more attractive devices, together with having an older phone which might be deteriorating in battery quality or appearance, lure many users. This fact is exploited by the mobile phone companies who give limited support for older models and don't offer repair services. As pointed out by Haddon (2003), domestication is 'not a one-off process' as our attitudes to artefacts change over time. In making subsequent purchases, users will have different expectations of their new phone than they did with their first. They will understand the phone's current role in their lives quite clearly, and also have a deeper understanding of the capabilities of the artefact and offerings of the market place.

All of the respondents had upgraded their phones to a newer handset, usually three or four times, and one person admitted that she was on her eighth phone in eight years. Another has had innumerable handsets:

> I go through about four phones a year, three to four phones a year. The line of business I work in – I work in plastering, and it gets covered. (male, age 25-35, club chairman)

Interviewees were asked did they care which model they used, and what features they would look for in buying a new phone. The group as a whole were quite uninterested in the appearance of their handset, 2 in fact remarking 'it's not for show, you know'. What did concern them as users was an easy-to-use handset. For 4 people, this specifically meant Nokia, the operating system of which they were familiar. The dominance of Nokia in the Irish market was evident by the comments of another who often borrowed chargers, and found Nokia's easiest to come by:

> I would always go with Nokia. For the simple reason if you run out of charge, it's the easiest one to get topped up. If you are in a pub or something, and you say 'Any chance of you charging up my phone?' It's very likely that they'd have a Nokia charger in behind the counter, rather than Motorola or whatever. (male, age 45-55, manager)

Durability was also important, as some of the respondents were manual workers, and their phones might have been subject to rough treatment. One person wanted his phone to have a high volume control due to using it in a noisy workplace. One older woman also wanted a durable phone with clearly visible letters:

> And mine is, I think they call it a builder's phone. If you drop it, it doesn't fall apart. So that's very good. (female, age 45-55, team trainer)

This woman may own a 'builder's phone', but she works as a secondary school teacher! Two others admitted that they had considered a 'flip-up' (clamshell) phone, but decided that they would not buy it because they believed it was vulnerable and likely to break.

All interviewees were asked about a camera on their phone as at the time of interview this was becoming standard even in low-price phones. Although most of those who had a camera had used it a few times, there were no signs of this group using their phone as a replacement for a digital camera. Several described their camera use as 'just messing', taking photos of friends in social situations, and one

mentioned taking photos of his children. Generally the quality of photographs taken was considered poor:

> I mean, the pictures are pathetic. I've never sent one to anyone. Just stored in it. I haven't done anything with them. … I've been at matches, or been at concerts, and if I think of it, I'll use it, but again they are just stored then. (male, age 25-35, club chairman)

One self-employed builder occasionally used the camera at work to record his craftsmanship:

> If you are doing jobs, now, jobs sort of, …you'd … like, you'd be proud of them, and you'd take a picture. (male, 25-35, player)

Another person had used the camera very little until her friend got one, and then they began to exchange photos, so she now would want one in any future purchase. The early camera models were poor quality, at least in the lower price range, and this appears to have discouraged interest in the function generally. Over time factors such as improved electronics, better optics and increased storage capability has meant that one gets better quality, but at this point in the consumption cycle using one's phone as a camera was not common practice.

A few respondents were interested in their phone having other features. Only one mentioned that they used it to access the internet:

> Just for getting ring tones or check news or sport or anything like that. Just go onto vodafone.ie [the provider's website], and it'll just bring up all sorts of things. (male, age 25-35, player)

However, this person didn't have an internet connection at home, and this was their only access. Another, a student who would be used to broadband access at college, complained about the service via their mobile:

> I don't like using it, it takes too long to load, and it's costing while you are loading. I'll come off it. (male, age 18-25, player)

Two persons mentioned their frequent use of the radio, and another mentioned a 'very handy light'. Generally, there was little enthusiasm for multi-featured, more sophisticated phones, in fact some thought that their current set was overly rich in features:

> There are various things I don't need at all on it. There are games. There are a few games the kids play from time to time. There were free downloads I didn't even bother getting. (male, age 35-45, club treasurer)

This general lack of concern for sophisticated phone capability, or for the appearance of the handset, runs contrary to much research on mobile phones which suggests that consumers care a lot about which handset they use, and see it as a fashion item as much as a functional communicator (Katz, 2005; Ling, 2000; Fortunati, 2005). Of course concern with image may be true of a younger age group – the interviewees here range from 18 to 55 years of age, and to them, durability and basic functionality are the most important features. One interviewee mentioned that her children had insisted that she upgrade to a smaller model:

> Oh, it's not for show or anything. Even though Ann and Sarah [her daughters] made me upgrade really because they said the other one was like a peat briquette [fuel block]. That I had to. This one is lovely, and I hope I never have to upgrade from this. (female, age 35-45, club secretary)

This quote also brings up another point – the fact that users are not always keen to engage in buying a new phone, especially if they feel forced to through breaking or losing their existing model. If they have no desire for extra features the decision making process can be complex due to the many offerings on the market. For someone who takes some time to become comfortable with the software on their handset, learning how to enact familiar activities on a new model can be a chore. While some people enjoy this stage, others definitely do not.

Since the interviewees had owned their phones for quite some time, and they are widely used in society, no one expressed problems with the service model of mobile phones, and everyone spoke comfortably about concepts such as swapping SIM cards, and the problems associated with roaming. This is unlike the findings in a 2000 study in the United States, where subjects had a poor understanding of the systems operating around mobile phone ownership and service (Palen et al., 2001). At this stage of adoption, the Irish market seem well educated about the technical use of their mobile phones and the terminology of use has passed into everyday language.

I also wanted to find out if becoming a mobile user had meant that the club members were interested in changes and advances in the technology in general. When asked, only 38% (8/21) of interviewees stated that they 'kept track of technology'. However, knowledge about mobile phones in general appeared higher than this figure might suggest. At the time of interview, 3G penetration in Ireland was only 5%[49], although the phone companies were advertising it extensively. Over half of the interviewees (10/21) could accurately explain what a 3G service might offer, but had little interest in acquiring it. Two people had a sophisticated service (Vodafone live! with a pre-3G video-sending facility) but did not know how to use it. Another had just replaced her phone in the past few days, after losing her previous model. She formerly had quite a stylish 3G handset, and had in effect downgraded, her new phone having a lot less features. She was a university student who had had a phone through all of her school years and now realised that she had been paying for a level of complexity that she was not exploiting:

> [The new phone…] just had to have the basics. ... The last one I had, when I bought it, it was 3G, it was meant to do all this video calling and all that. But I never ever used it, and it was just a waste of money getting it. (female, age 18-25, player)

[49] Vodafone figure of 217,000

Respondents to the question on more advanced technologies also displayed a general belief that a critical mass was needed with the video exchange feature of 3G. As one person said in the context of her buying a 3G phone in the future:

> Maybe in a few years when more people have 3G phones. It's kind of wasted now when you are the only person, and your friends don't have one, it wouldn't be any good. [I] wouldn't be able to use it really until it's more popular. (male, age 18-25, player)

Although there was a general dismissal of sophisticated features of their phones, there was one interviewee, an IT student, who expressed contrary opinions. He used the radio, light and recorder on his handset and was keen to add functionality to his phone:

> I'd like really to keep stepping up the whole time. Just keep getting new features. You wouldn't really go and buy another phone that didn't have those features. (male, age 18-25, player)

Interestingly, this person also had admitted that he bought the phone initially because he 'liked gadgets' and although he was not thinking about buying a new phone in the near future, was quite knowledgeable about the various handsets being offered in the marketplace.

The link with newer technology is not always voluntary as expressed here. For some users, upgrading to a smartphone may be a choice, but for many others it is an inevitability as by 2010 it was the main offering when they decided to upgrade. As mentioned in 4.1.2, by 2013 72% of the Irish population had smartphones and this figure is still rising. For any new purchase there needs to be a learning curve to become familiar with new features in the operating system, but when moving to a smartphone there is an additional step of accessing and incorporating new modes of communication (specifically the MI) into their current repertoire. Although this is an interesting study, it is beyond the scope of this thesis.

For all the interviewees, the mobile phone is now very much a fixture in their lives, and they intend it to remain so, with about half (10/21) believing that their use of the phone would grow in future.

5.3 Phone objectification and incorporation

Mobile phone ownership provides a more intimate relationship with technology than ownership of a device such as a television or desktop computer in that we carry it with us all the time. The handset itself therefore assumes particular import as it is being used visibly by us in public places, and its appearance affords the same significance as the clothes which we wear in reflecting the image we wish to present of ourselves. This is the objectification phase of domestication:

> ... objectification, like so much of consumption, is fundamentally reflexive, since it is possible to suggest that material and symbolic artefacts of all kinds (including in the context of this argument both the machines and the messages), in their physical and discursive arrangements and display, provide an objectification of the values of those who feel comfortable, or identify, with them. (Silverstone and Haddon, 1996, p64)

In terms of mobile phone use this might be expressed in how the user views the phone handset as a fashion accessory or a reflection on how up-to-date or tech-savvy they are. As already described, the club members interviewed did not strongly objectify their phones in this way as they were more interested in its functionality than in its aesthetic design. They did, however, attach importance to having it close by and all carried it to the interview, showed it to me and in some cases left the phone sitting on a desk or table throughout our conversation. This point is also reflected in the survey responses, where 96% of respondents stated that they always carried their mobile phone, and 94% said that they always had it turned on.

In an effort to ascertain how attached people felt to their phone, I asked interviewees how they would feel if they were deprived of their handset for a month. This got a number of strong reactions, with 4 people immediately saying they would be 'lost' and 4 others saying they would 'miss it'. However, on reflection most stated that they would get by and a few began to reflect on some positive feelings they had experienced when separated from their phone:

> I went on holiday to Spain and I just basically left the phone in my suitcase and didn't need it once. And I felt almost a relief, you knew that you were on your own or whatever and you have your free time and you weren't going to be interrupted or tempted, you know, to text. You were just left to your own devices. (male, age 18-25, player)
>
> I remember the last day I was babysitting I left my phone there by accident for the night, and all the next day as well, and by the end of it I really really loved it. (female, age 18-25, player)
>
> I think I would get quite used to not having one and I would nearly like it, because I do feel I have become very dependent on having it on and on my person all the time. Even though I survived quite well for forty years without one I feel that if mobile phones were abolished I wouldn't actually be sorry. (female, age 45-55, team trainer)

I also asked how they felt about their phone, and did they consider it important to their lives. Over 70% (15/21) stated that it was and one person qualified this by saying it was 'a necessity'. Of the 6 who didn't consider it important, 4 people stated it was 'handy', and one said they could 'take it or leave it'. I also asked if they used it as their primary telephone number (if, for example, asked on an official form) and over 80% (17/21) replied that they did, reflecting the fact that it was part of how they might publically identify themselves.

While objectification may centre on the display of the artefact, incorporation is more focused on the functional than on the aesthetic. Ling describes this as the 'temporal assimilation of the object into time structures and routines' (Ling, 2004a, p29). Because of its double articulation, the mobile phone has a double task in the incorporation process, as one has to weave both carrying the artefact (finding a place for it on our person) and also its communication function into the everyday patterns of life. The latter process may release time for other activities or facilitate 'control' over time[50].

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[50] Rich Ling & Scott Campbell encapsulated this point when they entitled their book on mobile communication practices *The Reconstruction of Space and Time* (Ling and Campbell, 2009).

I specifically asked interviewees about the belief that having a mobile phone saved time and travel, and if they had any anecdotes on this from their own lives. In replying to this question, the rural dwellers were much more forthcoming with stories of how using their phone saved time, and their responses were often linked with saving travel. Some of these answers related to their work, for example calling someone to bring a tool or equipment from town, or ringing a shop to find out if they had a product in stock before they travelled to purchase it. Others related to setting arrangements to meet, and two students in particular mentioned that when they return from college to the nearest town by bus they text someone at home when they are close by so that they can be met, saving waiting time for both parties. For all, the use of text instead of calls was also deemed to be a time saving: 'Text is shorter than having a long conversation' (female, age 25-35, player); 'If I just have to tell someone a small thing I can text' (male, age 18-25, player). Five people mentioned the use of texts for club communications (as will be covered in section 6. 1).

Another form of incorporation is the weaving of mobile phone affordance into the management of personal relationships, the second articulation of phone use. Users now have a complex range of media to hand (fixed line, mobile calls, SMS, email, F2F), and I was interested to see if there were any patterns in the choice over which media they use to contact specific cohorts of communicants, and also which communications partners benefitted most from mobile phone use.

The survey posed these questions of the wider audience by asking how they specifically kept in touch with three different categories of communicants: friends, family and club. They were asked to select one person in each of the three categories, and report what methods they had used to contact them in the past week. The responses showed that most people used a variety of links, with 52%

using three or more ways to reach their family, and 41% using three or more methods of contacting friends.

The contact patterns for each category of communicant are shown in Figure 18 (number of respondents on vertical scale):

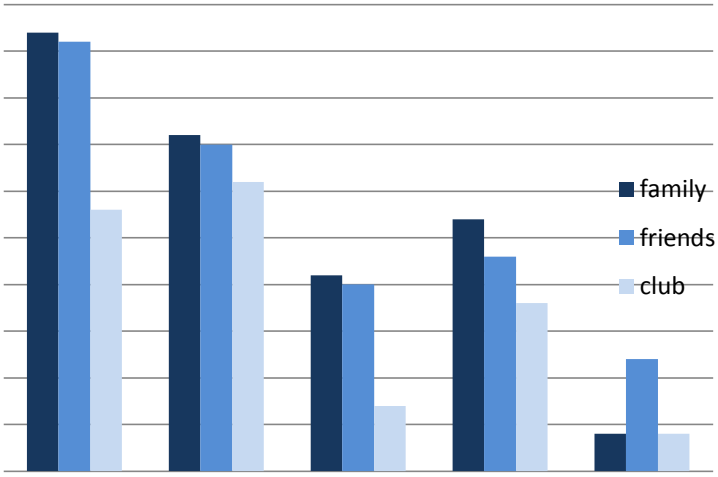

Figure 18. Questionnaire responses to the question 'What types of contact did you have with each group in the past week?'

Talking on the mobile phone predominates over all other methods for close ties, with 89% and 87% speaking to family and friends respectively.

These figures reflect the major *type* of communication methods used to contact each category of relationship, but not the quantity. When asked about their frequency of use of the separate media, 28/50 (56%) of respondents admitted to making several (mobile) voice calls per day, and 38/52 (73%) sent several texts per day. These quantities are very much in keeping with the statistics gathered by the communications regulator, who for the same time period reported that subscribers

sent on average 117 SMS messages per month, and made voice calls of just over 122 minutes per month.[51]

I was interested in finding which of the two media available through the mobile phone (voice and text) were most popular for each category of communicant. Responses here showed that people contacted their friends most, and were more likely to call their family than text them. This data as gathered by the questionnaire is shown in Figures 19 and 20 below:

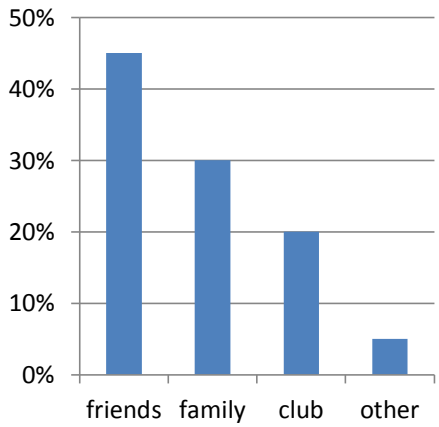

Figure 19. Questionnaire responses: whom do you most often text?

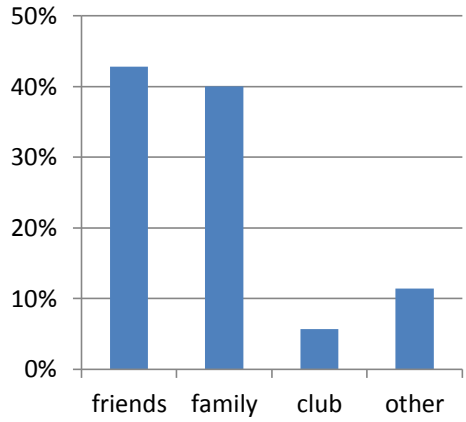

Figure 20. Questionnaire responses: whom do you most often talk to by mobile?

This use of text pattern in figure 19 shows that many short contacts with close ties is the predominant use of mobile phones: the perpetual contact phenomena. The close ties in this instance are family and friends. Overall, the use of texts predominates all communications. Similar results were found in interview. Less than 20% (4/21) of the interviewees used voice more than text, and 2 of these who did were required to do so for their work. There were no discernable differences in male/female use, or that by rural/urban dwellers in any of these patterns.

[51] Calculation based on the ComReg figures of 1,568,298,000 minutes voice calls made during this quarter, by a subscriber base of 4,270,000 (ComReg,2007).

I had also asked all of those whom I interviewed to categorise the last 10 incoming and outgoing calls on their phone. While this was an exercise to see did any specific patterns emerge, I realised that if they could do this it would demonstrate their comfort with the operating system of their handset. Everyone completed the task successfully by immediately going to the correct menu on their phone and writing down what they found with no requests for clarification or help. It was evident that looking at this data is a common practice with people. The data gathered appears in the table below (Figure 21).

SENT		A	A	S	P	P	P	P	P	P	P	P	P	P	P	A	A	A	P	P	total
	family	0	1	2	5	3	8	7	4	7	4	3	4	6	2	3	3	5	4	5	4	80
	friend	0	2	7	1	3	2	3	0	1	2	3	3	1	2	2	3	2	3	3	2	45
	sport	10	2	0	1	3	0	0	2	1	0	0	3	1		4	3	3	2	1	0	36
	work	0	0	0	1	1	0	0	4	0	4	3	2	0		0	0	0	0	0	0	15
RECEIVED																						
	family	2	1	4	7	3	8	6	5	4	2	4	1	7	4	3	5	4	4	6	5	85
	friend	1	1	6	1	3	2	3	1	4	2	2	1	2	2	3	2	4	1	4	4	49
	sport	2	5	0	1	3	0	0	0	0	0	0	3	0		3	4	2	2	0	0	25
	work	5		0	0	1	0	1	3	0	6	3	3	0		0	0	0	0	0	0	22

A= administrator; P= player and S = supporter.
The data to the left is the rural club, that to the right the urban.

Figure 21. Last 10 calls data

There are no obvious patterns appearing in this data. It does however support the reported figures that friends and family are those with whom club members communicate the most. I acknowledge that these are snapshot figures and will depend on the recent activities in that person's life and so may vary quite a lot. When I asked did they think these were typical communications, most people said that they were, but sometimes qualified their answer with a story about their recent activity. For instance the first respondent was a club chairman and he explained that he had just been contacting all of the committee members about an upcoming event, so his pattern showed a stronger than usual emphasis on sporting contacts.

I asked the interviewees did they think that their mobile calls replaced fixed line calls or were they in addition to other calls. I also asked did they think that texts sent were a replacement of, or in addition to other communications. In both cases, opinions were evenly divided, with approximately half believing that they were communicating more now that they had mobile phones.

A related question asked about what they now considered their circle of friends – 'Have you changed your circle of contacts in any way due to using a mobile phone?'. Eight persons replied that it made no difference, but all of the others (62%) said that their circle was 'wider' or 'closer'.

> It has expanded, it has expanded definitely. Consider just the numbers, how many people are in my phone book now, I don't know what it holds, two or three hundred people. Whereas, if you didn't have a mobile phone you'd be relying on writing a number down, a land line number, or something like that, and I don't think…you'd lose it, or …so it's fairly easy, I suppose. I go through it, every so often, every month, or once or twice a year, I go through my phone book and I see someone I haven't been talking to for a while, and I send them a message. (male, age 25-35, player)

> My circle with the mobile has got wider. I've my texting buddies (female, age 25-35, supporter).

The ease with which one can record and store numbers in a mobile phone means that some people gathered numbers very casually:

> Just, say I'd meet them once, and just take their number, and I can text them there an odd time, that's how we get on, then ... [people] who've gone to college, far away, anyplace. Even people I met and play matches, and talked to, [I take their number] ... and text them later on, and meet them again. (male, age 18-25, player)

> ... you have loads of friends . You can … it is very socially acceptable to text them. And it doesn't mean that you are friendly, or they are friendly or anything, it's just handy to ask them a question or something. (male, age 18-25, player)

> Just say you meet a new friend, and then you get friendly with their friends. You always seem to be passing on your number. (female, age 25-35, player)

This has been evidenced in other studies (for example, Licoppe and Heurtin, 2001) where the swapping of numbers has been considered a form of 'gifting' between new-ish acquaintances.

Although the phonebook may reflect a wide circle of friends, this does not mean that these are all close friends. One person referred to their phonebook as containing an 'inner' and 'outer' circle of friends:

> Yes, there is a closed group. There is also an expanded group as well, more an outside group, from the point of view of just meeting friends, like. Maybe if you are invited to parties. My 21st [birthday], like, it's I just invited people on my phone. I just went down through all my contacts ... and they came. (male, age 18-25, player)

While there may be an increase in friends due to gathering the numbers of casual contacts, and a consequent increasing of the wider circle, there was also a feeling that the inner circle of friends were in ways more tightly bonded now that they were only a keypress away:

> ... you would make more friends, like, but you'd be closer to the friends you'd have known for years... closer ones become closer. (male, age 25-35, player)

Also of interest is not only who is called, but when and where a call is made. Although we term the artefact in question 'mobile', other research has found that much use of personal phones is *not* actually when one is on the move. I asked interviewees about their location during calls. There were a variety of answers, with 8 out of the 21 reporting that some of their most intensive use was at home. In fact for four interviewees, the mobile had replaced a fixed line phone in the household.

> … we had one in the house, but we got rid of it. .. Everyone has a mobile now, and there is one to spare, but it's not in use. (male, age 18-25, player)

Other responses included at work or college (13 replies), or for some ‘anywhere except work’, since they had a phone on their work desk which they used instead. A common response was ‘out and about’, or ‘everywhere’ indicating the widespread use of the mobile for micro-coordination of social lives and the constant presence of contact-ability.

There were no obvious differences in the patterns of use by rural/urban or male/female users.

5.4 Inhibitors to use

It is not all a positive picture on mobile use. Many interviewees expressed frustration with their phones and sometimes felt blocked in their usage of it by factors such as prohibitive costs or the service they received. None of these factors were enough to stop them using their mobile, but were rather something which people were willing to tolerate (although not happily) as they deemed the benefits they accrued from use outweighed the disadvantages. As Haddon states 'when talking about communication problems 'issues to be handled' may sometimes be a more accurate description' (Haddon 2005, p89). There were four main reasons which emerged in interview as inhibitors to mobile phone use: the cost of calls, signal strength, telephone etiquette and (unexpectedly) incoming 'private calls'.

5.4.1 Cost of calls

As already mentioned in section 4.1.2, the Irish population are high consumers of the mobile phone and they also pay a lot for this use. Irish ARPU (average revenue per user) is consistently the highest in Europe, and for the period of the interviews and survey stood at €44.80 per month, well above the European average of €29.87 and almost €9 more than the second highest country, France (ComReg,2007). It is a common perception that the mobile phone is expensive (even in countries where the ARPU is much lower), and there is evidence in the literature that many users feel the need to control their use (for example Crabtree et al., 2003). I therefore specifically asked questions in interview around cost and payment choices.

The interviewees reported personal costs ranging from €30 to over €100 per month[52]. One person admitted that he had received a bill of over €200 for one month, but immediately contacted his carrier to protest. Their recommendation was

[52] At the time, the average Irish net salary was € 1,353 per month (calculated from Eurostat figures, 2006).

that he change tariff. Of those who admitted their monthly cost, the average was €51, well above the national average, the figure for rural dwellers being higher (€56) than for those living in urban areas (€42)[53].

The tariff charges for mobile phones can be very confusing, with each carrier offering different types of package and the offers covering these changing frequently. The three mobile phone companies operating in the Irish market at the time of interview all wished to have customers signed into an annual contract and offered preferential rates for those choosing to pay through their bank account (post-pay). Despite this, only a quarter of Irish customers chose a post-pay method, with the remainder topping-up their pre-paid credit when needed. There are many outlets where this is possible, in shops and service stations, and it can also be done by text or through the internet or an ATM machine.

Eight of the interviewees used a post-pay method to pay for calls. This figure (at 38%) is higher than the national average (25%), but 4 of the 8 stated that they used this method specifically because they were self-employed, and they wanted a bill so that they could complete their tax claims easily. All of those who used a pre-pay method (buying credit in advance as required) justified their choice by saying that they didn't want the surprise of a large bill, or in fact any additional monthly payments coming from their household budget. Being pre-pay facilitates them to keep a watch over their spending:

> ...when I was getting the phone I felt that I had enough bills, between ESB [electricity], and the house phone, and NTL [cable TV] and everything, and I just decided I didn't want another bill, and it should be easier for me to pay for it as I went along ... I could control it better. (female, age 35-46, club secretary)

[53] The outlier value (the exceptional €200 mentioned by one urban dweller) was excluded from the average calculations.

> If I had a bill, I'd just be calling everyone and then at the end of the month, I'd have a huge bill, it's a danger ... when you do pre-pay, it's only just as expensive as you make it, really. When I run out, I just go without credit, which is really annoying. So, yeah, the price of calls are dear, but as long as you get the free texts and stuff it is okay. (female, age 18-25, player)

> If I had a bill phone [post-pay], now, I'd find I'd use it more. You'd be making calls, you'd be sort of careless, like, whereas the pre-pay one if you run out, that's it, until you go and top it up. (male, age 25-35, player)

All the interviewees were conscious of the cost of calls, and most people had some personal means of control, at a minimum using texts instead of voice calls:

> I think that's the beauty of texting. I think the 10 euro goes so long and it's a great way, in a sense I think it really stretches it. Weeks I put 10 euro in, but I text. (female, age 25-35, supporter)

Some people were very au fait with various tariffs and costs, or of specific offers by a particular carrier. In fact one respondent mentioned that there had been an offer of free texts for two and a half years with the carrier Meteor, provided these were sent Meteor-to-Meteor. Himself, his girlfriend and several of their friends had agreed to change to this carrier so that they might all avail of free communication within their circle.

Despite their concerns over cost, interviewees stressed their need to use the phone. Nobody admitted to curbing their communication because of costs.

5.4.2 Signal strength

The problems of signal strength in more remote areas causes serious inconvenience in the reliability of communication for both sender and receiver. This is particularly acute for those living in rural areas, and they will often choose their carrier based on the quality of the signal provided in the area (a factor which emerged in interview as more pertinent than cost or any other service facility). Several interviewees were

able to discuss the strength of signal in their local area for different service providers, and knew the location of masts[54].

This was a problem found mainly within the rural cohort of respondents. The topic came up casually in a number of interviews: one person reported that they could get a signal outside their house but not inside; several friends were all part of the same network because it provided the best signal strength in the local area; self-employed builders were particularly aware that if they were travelling to different jobs within the locale their ability to be contacted may be compromised by signal strength. There appears to be considerable sharing of information on the subject, with those living close by comparing signal strength and often changing carrier based on their neighbour's superior reception:

... the coverage does change with them [the carrier], there are masts going up all the time. So whatever people think is the 'going' one, whatever they think is a good reception. My family has been using Vodafone, they say it has a good reception. (male, age 25-35, player)

The signal strength affected not only the sending, but also the receiving of calls, and those trying to call knew that sometimes they might not get a connection:

> I would have to ring the county secretary, the county fixtures secretary, with results. And, he's a very hard man to get … he's in a part of the country where the reception isn't great. (female, age 25-35, club secretary)

> I know, from at home, we have a very bad signal ...If people can't get through they can always ring the home phone 'you weren't strong on your mobile, you didn't have a signal', like. Try mobile first and then land line. (male, age 25-35, player)

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[54] The communications regulator, Com Reg provide a website for consumer information on which they show a map (with a comprehensive search facility) of all the masts in an area. (www.askcomreg.ie)

Similar evidence is absent from most other studies which are essentially urban-based and where the signal coverage is usually universal, and as I did not specifically ask questions on the topic, this evidence is based on the frequency with which it came up in conversation. Although most carriers suggest they have 100% coverage of the country, some customers find they live in an area where signal is patchy. They sometimes do not know this when they sign up for the service but accept it as a limitation of living in a more remote area.

5.4.3 Unknown callers

Another problem reported by interviewees was that of receiving calls from an unknown source. Users have become accustomed to the caller identification (caller-ID) feature on mobile phones, where the name of the incoming caller is displayed on the screen, and they will look at this before answering. I asked the question 'Do you ever refuse calls?' expecting to find out when and where they might not feel able or willing to engage in mobile conversation[55]. Unexpectedly, many of the answers were about calls coming from an unknown source. The caller-ID display may also show UNKNOWN NUMBER, or PRIVATE NUMBER (when the call is from an extension on an internal network (PABX). When asked did they ever refuse calls, over a half (11/21) mentioned this, and one third (7/21) stated that they did not answer a call when PRIVATE NUMBER was displayed on their screen. Some explained that it was because they assumed the call was from a call centre:

> I won't answer if my phone comes up with PRIVATE NUMBER or CALL WITHELD, because either it's the bank, calling you to do a survey [laugh], most of the time it is, and PRIVATE NUMBER, it's either they have got the wrong number or they will leave me a message. And if they leave a message, you know they are looking for you. (female, age 25-35, player)

[55] If the respondent stated that they did refuse a call, I intended to follow up by asking 'Do you feel the need to excuse this behaviour?'

This period had seen a rise in the number of cold calls subscribers received, so the possibility of an organisation such as a bank calling was a valid assumption[56]. There was confusion, however, over this matter, as most people believed that the PRIVATE NUMBER message was a deliberate act of masking by the sender[57] and they didn't reply to these calls because they didn't know who was calling them:

> I refuse 60-70% of PRIVATE NUMBERs. I think 'Why are you ringing me? (male, age 25-35, player)
>
> I don't see why people would hide their number. (male, age 25-35, player)

One person had realised that calls coming through a PABX also show PRIVATE NUMBER on the receiving mobile screen and mentioned getting calls from one of his friends:

> …it's from a factory in Galway, and he rings me from it, and he nearly always rings me on a Monday, so I know it's him. (male, age 25-35, player)

This has caused him to modify his behaviour and he now only answers PRIVATE NUMBERs on Mondays.

One interviewee had other ideas where his unwanted calls might be coming from. A self-employed builder, he believed that his PRIVATE NUMBER calls might be competitors for work:

> I often get through work, PRIVATE NUMBERs enquiring about the price of a job – how much per square meter, say… It could be someone else is at a similar job, looking for a cheaper price (male, age 35-45, player)

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[56] This problem was so severe, in particular for land line phones, that the communications regulator had taken to advertising how subscribers could join a database to be excluded from such calls.

[57] The caller can mask their number, however, the caller-ID NUMBER WITHELD will then appear on screen.

He suspected that other builders were calling, blocking their number, in order to hear his quote for a job, so that they might be able to undercut it. He refused these calls because he didn't want to give this information to a business rival. However, in not answering these calls he might also potentially block someone calling with new work.

One other interviewee had a slightly different problem with the origin of calls. He has two phones – one is provided as part of his work (as a lorry driver) and fixed to the cab, and the other his own personal mobile which he normally carries with him.

> … I left it [my own phone] in the cab [of my lorry] when it was in the garage yesterday. It was a small time, but there was something like eight missed calls on it. That was from the lads at work. They know I have the other [work] phone, like. I was very surprised to see all those missed calls, all in one day, seeing I had that many. (male 25-35, player)

In effect, his work mates were ignoring the division between his work and his social phones even though these are distinguished by both employer and employee. When they couldn't contact him on his work phone, they immediately called his personal phone.

Overall, these comments suggest that only persons within respondents' own social circle (as defined by those whose names were in the phonebook of their handset) should be calling. In effect, the phone owner didn't want their privacy invaded with a PRIVATE NUMBER. The comments also reveal a belief that one holds the number of everyone who has their number, intimating that all numbers are gleaned by exchange only.

5.4.4 Telephone etiquette

There has been much research and comment on the etiquette around when and where mobile phones should be used in public, and I asked questions specifically

around this topic. The interviewees variously suggested they should be banned while driving (6 responses) and from meetings (5), churches (6), restaurants (3), schools, hospitals, airports, theatres, and public transport. Since the interviews took place, the use of mobile phones has been banned by law while driving.

When asked if other people's use annoyed them, answers included 8 persons expressing distaste as to how others might use the mobile when engaged in a face-to-face conversation, deeming it very rude to either text or speak on the mobile when in company.

One person mentioned 'forced eavesdropping' (Ling, 2004a) as being intrusive to him:

> … they are talking about their daily lives, and their personal goings on or whatever. I don't want to know about other people's going on, I'm just concerned with my own lifestyle. … It's grand, text messages are grand, I don't mind, but as regards voice calls, I'd prefer to keep it more private. Maybe it's different if you are in a car, you get a phone call, that's grand, but when in a room where there is an option to go outside... (male, 18-25, player)

Leaving the room during an incoming call was also suggested by others, or even saying 'excuse me' and taking the call was more acceptable than just dropping any communication with the co-located. However, since it happens to everyone, it was acknowledged that receiving a call was difficult to negotiate:

> Well, you could be in the middle of a conversation; and I know we all do it, and it probably annoys them about me. You are in the middle of having a chat, and a mobile rings, and that's it. You take the mobile and ignore your chat. (female, age 25-35, player)

One person mentioned that someone talking on their phone was not only rude, but also demeans the person they were with:

> You'd feel not as popular if people are talking on the phone beside you. Why doesn't anyone ring me? [laughs] (male, age 18-25, player)

Even text messaging, which to the culprit might simply appear to be an expedient way to multi-task, often frustrated the co-located:

> You know my sister used to be so bad. It'd be in public, and you'd be talking, and she'd be texting. … and I'd be thinking – you are so rude! Because she is talking to two people at the same time. … she used to get on my nerves. (female, age 25-35, supporter)

Respondents also remarked on the phenomenon which Ling and Yittri (2002) have described as 'softening of time', the idea that meeting times could be readjusted by multiple short calls or texts. It was suggested that this was deemed to relax manners:

> Because you have a mobile, you don't have to be on time. (male, age 25-35, player)

Two persons mentioned that using a mobile phone had 'made us lazy'. It is safe to say that an expressed opinion on when and where others should not use the phone might be reflected in one's own practice of use, and act to inhibit one's own behaviour.

Chapter 6
My club in my pocket: community use

This section examines the incorporation of the mobile phone into club communication. Just as individual members had to domesticate the phone into their own lives, so also did the club as an entity have to come to terms with this new way of communicating. Once a few members had adopted the phone and established its usefulness, they spread the word and encouraged others so that soon the mobile phone became the most common medium of communication within the club. This incorporation phase saw changes in practice and adoption of new routines to exploit the obvious affordances offered by being able to call anyone from anywhere, at any time. I examine firstly the content of calls made within the community group, for both social reasons and specifically for club business. I then look specifically at the way in which club managers adopted the mobile phone to inform members of upcoming events. The mobile phone is now a key work tool for club administrators and has brought a special meaning to mobile phone use within both clubs.

Although most club interaction in the club is done face-to-face when supporters and players meet at matches, training and club events, the members use a range of methods to communicate with each other between these meetings. Talking and texting on the mobile phone far outweighed any other form of communication link as there was little use of email and no website or other on-line forum available for communication within either of the clubs surveyed at the time[58].

The content of messages passing between club members is mainly focused on making social arrangements, and this has been greatly enhanced by the use of frequent text messages. However, some of the calls and texts are expressly for club/community interactions, and I asked a number of questions in interview to ascertain the nature and frequency of these in order to establish current patterns of communication within the groups as a whole. Since the clubs were in existence before the advent of mobile phones, of particular interest are messages that could not have been made previously.

There is a distinct difference in the frequency and types of communication made by 'ordinary' members and those with an administration role within the clubs. Administrators are regular members who have voluntarily taken on an unpaid job such as secretary, chairman, or treasurer and look after club affairs[59]. This role means they have to communicate about meetings and club business and they would also be those most concerned with the cohesion and future of the club. Other members take on a role more directly concerned with the game, such as manager, trainer or team selector and their club communications might be focused on training and fixture arrangements. Every interviewee mentioned how these two groups use

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[58] Both clubs now have active web sites: http://stmichaelsgaa.ie/ and http://www.kilnadeemaleitrimgaa.net/

[59] These positions are usually voted in at the club's AGM, and very often post holders are re-elected for several years in succession.

'group texts' to communicate with members. For that reason, this feature has its own section in this chapter.

Introduction of the smartphone and its access to the MI has opened up a range of new communications options for club members. Through the follow-up conversations I gained insight into the use of mobile phones for club communication beyond text and voice calls and learnt of a number of other ways in which members were interacting on their phones.

6.1 Call content within the club

During the playing season, gathering for training or matches may mean that club members meet in person several times per week, and so face-to-face communication is the predominant form of communication, particularly for longer conversations. In between these meetings, the mobile phone is used mainly for short messages such as refining or making arrangements rather than chatting or gossiping. Members who are not able to meet regularly use their mobile to keep up with the news of the club. For those who work or live away from their home base (and particularly students who are away at college and who retain their club ties), the use of regular texts ensures they keep current with gossip and news. Text messaging very much dominates communication links throughout both clubs.

6.1.1 Social Use

For many players in particular, their fellow club members form the immediate circle within which they socialise[60]. They also meet to play other games, such as five-a-side soccer, or as drinking companions. These members are usually those who live and work within the local area and they have known each other since early schooldays. Interviewees report using the mobile phone as a key communicator to organise their social lives: arranging meetings, rescheduling when delayed, and texting to see if their friends were in the vicinity on a night out. This type of use is well recognised in research, and Ling has termed it the 'micro-coordination' of life (Ling, 2004a).

Since they see each other regularly, and even have set times to meet (for example in the club, at Tuesday night training), there is little use of the phone for substantive

[60] For some, socialising is the reason that they join such a club in the first instance. In their research on the social and economic impact of sport in Ireland, Delaney and Fahey found that 75% of hurlers and 48% of those playing ladies football (the two categories here examined), will socialise at least weekly with other players. (Delaney and Fahey, 2005).

talk in between, so texts are often used to make social arrangements. These might be seen as extra communication links to those prevalent before mobile phones were widespread, and they have enhanced social interaction in general, as shown in the following interview exchange:

Pat	And most of your text use ...
Danny	… to see who's going for a pint [laughs]
Pat	And before you got the mobile, how would you have made those contacts?
Danny	Ah, by chance meeting them. I wouldn't ring somebody's house now to see were they thinking about going out
Pat	Okay. But you would ring their mobile?
Danny	Yeah
Pat	So, then do you reckon you have more contacts with people?
Danny	With the mobile, yes. Easier contact. Even out of areas, text message, to where anybody is, where they are in town.
Pat	So in ways it has made your social life more active?
Danny	It has, more contact, yeah.

(male, age 35-45, player)

Several interviewees report using text messages in this way as they enable a direct line to the recipient. Calling a fixed line phone (which they often referred to as the 'home phone') would entail possibly engaging in conversation with a third party, or having to leave a message which they could not be sure was delivered and so not reach the called person at all. In fact, many respondents stated that they no longer ring 'home phones' at all

> Just to cut out the middle man. Because there is always someone else answering the phone. (male, age 25-35, player)

> It's all mobile. I don't know when anyone would ring a landline now. If you have a pile of lads you'd ring them on the mobile or text them. You'd never ring a house. (male, age 25-35, player)

Using a mobile phone is convenient, and does not interfere in any way with family life.

The smartphone has brought a new affordance to social communication in that it provides the ability through social networking to make comments in a public forum. Rather than sending your message to an individual, it can now be posted onto *Facebook* or *Twitter* where it may be seen by any other subscriber. Members also report using *WhatsApp* which enables a type of 'group chat'. Social networks are used by both clubs to communicate matchday arrangements, best wishes to players and 'live' match updates to a wider public group.

I asked interviewees did they have the mobile number for all their friends in the club stored in their phonebook. The majority (16/21, 76%) said they did, with the remaining 5 claiming they had most, maybe 50- 60%. I also asked how they might contact those for whom they did not have a number, and the answer universally was that they would contact an intermediary, another person who was a mutual friend and request the number from them.

Again, there was no significant difference in responses by male/female or urban rural respondents in these figures.

6.1.2 GAA interactions

Although much use is social, there are instances where text messages are used by ordinary club members in what might be specifically GAA interactions. For instance, players might make arrangements to go and see the games of teams who might be future opponents, or call another to ask directions to a game venue or for a lift to a match. Evidence on how closely the club is integrated into everyday life is reflected in the fact that several interviewees gave examples of GAA interactions when asked if using their mobile phone saved time and travel (as reported in section 5.3):

> I was supposed to collect hurls [the sticks used to play hurling], just myself ... and I was directly in the car, and if I was in the house I wouldn't have heard the house phone. So I got a phone call on the mobile to say he wasn't at home, the guy with the hurls, so that saved me a trip. (male, age 18-25, player)

> Probably the best example is through our own club. If someone was at a match, and you are trying to find a location or something like that, and there is obviously going to be no land line, so you are going to ring them or text them. (male, age 18-25, player)

> You can make unnecessary journeys... you can leave here and be on the road and find something has changed, a match is postponed or something, you don't need to go... rather than just turn up and nothing happens, you are likely to get a text or a voice message, the voice message to say, turn back. (male, age 35-45, club treasurer)

> If a training session has been cancelled, and you get the text beforehand, then it saves you the time and you don't turn up, and you are not sitting there waiting. Or you turn up and it's 'Sorry girls, the match has been cancelled' and we all have to go off again. From that point of view it does save you time definitely. (female, age 25-35, player)

The other main GAA interaction by ordinary members is to contact the team manager or trainer about match or training arrangements. Every player got a text message to remind them of upcoming fixtures, and they would normally reply only if they were unable to attend, usually by text. Some players also mentioned ringing the manager to confirm arrangements.

The one GAA interaction that was generally not deemed suitable for a voice call (by players in particular) was post-mortems of the team's performance[61]. This was either the subject of a short text to express an immediate reaction, or else meeting socially for a more extended face-to-face analysis. The initial text was usually an expression of euphoria or disappointment:

[61] Only three interviewees (from the 21) mentioned they might post-mortem a game by mobile voice call.

> I'd have one or two, buddies I suppose, that I would text. You might say 'I'm pissed off after that game', or 'That was rubbish' or, 'That was brilliant' … if it's basic frustration or over-joyment [sic], or whatever, it could be text. (female, age 25-35, player)

Practically everyone agreed that a more detailed post-match analysis was definitely for face-to-face meetings, usually in the local pub.

> That's definitely face to face, especially in the bar… a sad routine really [laughs], we're all going to end up in the pub after the game, and it's going to be face to face meeting. (male, age 18-25, player)

Others just dismissed out of hand the idea of using the phone for this purpose:

> No, I just think that would be a waste of money, really. You can always talk to them [F2F]; reminisce about stuff in a meeting. It wouldn't be a realistic thing, to talk about a match on mobiles. (male, age 18-25, player)

One person mentioned some disadvantages of loose pub talk and he did resort to voice calls:

> … there may be too many in to post-mortem in the pub, you know. The man you might be saying something about might be just there beside you. (male, age 35-45, player)

The club players in particular are a very close group, and often engage in the common Irish activity of 'slagging', that is ribbing or teasing their team-mates. Slagging is a friendly form of teasing, usually only practiced between close friends. It would constitute a 'throw away' remark during a conversation and be accompanied by a smile and returned with a laugh or similar riposte. It appears that this too has made its way into the use of SMS messaging. This is a particularly casual type of banter and its use might denote two people who know each other well, and understand that the SMS, while lacking in meaning or appearing as a sharp comment to an outsider, is meant in a jocular fashion. However, since it lacks the secondary signals which we use in everyday speech, there is a danger that such

a text may strike the receiver as offensive. The use of suitable emoticons ;-) can relieve this situation; there is no similar feature which would allow this with a slagging comment on a voice call. While the practice of passing on jokes on topical matters by mobile phone is widespread, this is a more intimate form, an 'in-joke'. Slagging by SMS is used by club players in the same way they might pass an aside to a co-located person, and can be seen as another form of keeping in close touch.

Several players described using text messages to 'slag off' others about their performance: 'Why did you miss that goal?' (male, age 18-25, player). This is an activity which seems particularly suited to text messages rather than voice, possibly because a text message is less loaded in its connotations, and the recipient was less embarrassed. It also had the advantage to the sender of not having to experience a retaliation face-to-face while giving them the enjoyment of wondering about another's reaction:

> I suppose there are some people you get more fun out of, texting than ringing. … slagging and teasing and ... just messing. (female, age 25-35, player)

Smartphone use has enabled a wider audience for slagging in that an in-group joke can be shared easily in a closed social network group, with multiple comments and replies:

> We have a *WhatsApp* group for the players. Mostly it'll just be the lads having the craic and chatting away. (male, aged 18–25, player)

The other place where the mobile phone is used for GAA calls is by the crowd attending a game. I observed mobile phone use at a number of matches, and found very little use during the normal action of a game, but considerable use of both talk and text when a score is made, when callers are presumably updating absent fans on the team's progress. Many people used a mobile phone at half-time, and pulled away slightly from the noise of the gathered crowd to make a voice call. There is considerable (face-to-face) chat normally during games, and this can be with anyone

(even strangers) sitting close by. At a game, the co-located are of primary import. People usually discuss the progress of the game, shout to the team or disagree over a referee's decision. There is little time and rarely enough silence to make a voice call during the fast action of a match.

The patterns of interactions about GAA activities were common across both groups and genders.

6.2 Club management

Each GAA club has a formal committee who are responsible for the day-to-day running of the club and its premises (clubroom, social centre and pitches). The committee would always have had the need to communicate with the membership as a whole to inform them of club events. In the same way, team managers would have needed to keep in touch with all of the players as regards matches and training. This work would originally have been done by face-to-face contacts – calling at houses, passing messages through others, or having an announcement made in the local church. In more recent years, the fixed line telephone may have reduced the amount of work this engendered, but burdened the administrators with many calls in order to ensure everyone was informed. Today the committee and managers use their own mobile phones to communicate within the club.

In interview I discovered that the club administrators use broadcast SMS messages to communicate with their members. This has turned out to be a 'killer application' for both GAA clubs, and was mentioned by *every* interviewee, where it was generally referred to as 'group text'. It seems to have been 'discovered' by the members, as it is not promoted by the GAA or particularly suggested as an application area by service providers. The use of group texts in both clubs, which are geographically distant and not linked in any way, might suggest that this is a somewhat natural development of use which has evolved independently in both places, rather than being a novelty application which has spread through club connections. In this way it is an unexpected use, not foreseen by designers of the technology. In any case, it is a new opportunity provided by mobile phone use, as there is obviously no equivalent facility on fixed-line telephones.

6.2.1 Broadcast SMS: 'group text'

Broadcasting an SMS message to a group of people can be done either through web-to-phone access, or using the 'Distribution List' facility found within the software of (some) handsets[62]. All of the Irish mobile phone service providers offer a limited number of free texts per month (up to 300) and the option through their websites to send texts, in a single transaction, to all members of a pre-specified group. This works much like setting up an email list. For instance, the manager of the under-18 hurling team may have the mobile numbers of all of the team set up as a list, and he or she then creates a text message to inform them of a change in the venue of an upcoming match. The manager keys and sends it once and all on that list receive the message. The use of group text executes the job simply and swiftly. It also ensures that everyone gets the same information, and because of its asynchronous aspect, the receiver doesn't have to be present to accept a call.

One of the duties of the club secretary is to convene meetings, which usually take place on a monthly basis. To ensure maximum attendance, the secretaries of both clubs have taken it upon themselves to send group texts as reminders to the committee of the upcoming meeting. The secretary of the women's club explains:

> I always remind them of the meeting, because it's easy to forget. We have a meeting once a month … so I just send it the night before, or two nights before … You would always have been able to contact people, so text replaced phone calls. … Now it's just handier to make a distribution list and the one text and send it to everybody. (female, age 35-45, club secretary)

The managers and committee members who send these texts are all very enthusiastic about the new affordance provided by broadcast SMS. Talking about her use of the technology, one manager says:

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[62] Not all mobile phones provide the 'send to all' facility as an integral part of their operating systems. In fact, some of the most sophisticated phones don't have this facility, while the more basic models do. (personal communication, Symbian employee, September 2006)

> I do that a few times a week. I find it very, very good… Say under-16 girls, they are … already categorised into that group. So you send to all of those, and the text message will come up 'Send to twenty six people'. And you just tick OKAY. And there are 300 free web text messages per month … the fact that it is free is fantastic at the moment. … To do it by land line you'd have to hang up the phone, and lift it again, and dial every number …[and] …engage in conversation, and sometimes the person wouldn't be there, and you'd have to go back and try that number again later. At least with a text message it's gone. And whether they read it there and then, or read it the next day, it will deliver eventually… It is fantastic. (female, age 45-55, team trainer)

The club members who receive the SMS are passive in this transaction – they only reply if they can't make the session. However, they too are very positive about its use. They appreciate the timeliness and speed of the information they receive, with one member describing how previously a decision on fixtures taken by a county committee on Monday evening might then have been communicated by post. This entailed the secretary writing postcards on Tuesday, and players needing to wait until these arrived before having confirmed arrangements:

> … at one time you wouldn't know until Thursday or Friday. Now, with the phone you know Tuesday morning. (male, age 25-35, player)

Getting speedy updates on changes to venues or cancellation of a match due to weather conditions also eliminates unnecessary travel, an important factor especially for rural dwellers.

Interestingly, the one exception to sending group texts in each club was when the target group were juvenile players. The team manager explained that either because the players didn't have mobiles themselves, or perhaps that the message should go to the parents who would be bringing them to matches or training session, it was often better to use another approach. In one instance, the players were all attending the same local primary school, and during term time that was a point of contact where a message could be delivered to the group as a whole. Only in the summer

months was a phone call necessary, and that was to the home rather than to the individual child.

Normally club information SMS messages are sent out to everyone only by administrators. However, sometimes texts are also sent as a 'daisy-chain' from player to player, not using a distribution list but rather as a 'pass it on' type message. One player described how he had got a text a few days earlier which had been 'doing the rounds':

> Tomorrow evening now we have the underage [players] receiving medals, and the older members of our club say 'Please show up, because they love to see you coming, they look up to the older lads.' And everybody got a text… I got it two or three times, off different people, so I'll definitely go up tomorrow night. (male, age 25-35, player)

While not as frequently used as the group text facility, the concept of text messaging being a good way to get a message across to a large number of people is obviously evident throughout the club.

The smartphone has brought some new options in distributing messages. The use of a closed group in *WhatsApp* or *Facebook* can also target a specific set of people in a cheap and convenient way, and very often a message sent through group text is often copied to such 'closed groups' on other media. More public notices such a club lotto results are usually sent to social media sites by club administrators.

6.2.2 What broadcast SMS means to the clubs

For the administrator, sending a group text provides a speedy option for distributing information, and eliminates the need for conversation with intermediaries. It is particularly useful when there is a last minute change, such as when a match is cancelled due to inclement weather, or training is to take place at a different location. Using text messaging thus builds a new flexibility into the

organisation of club affairs since they can accommodate change easily, and are able to inform everyone of any decisions directly and quickly.

For individual committee members or players who receive these texts, they are assured of receiving the message. Giving a message to the club team would previously have been done by announcing details of the next meeting to all gathered in the changing room after a game or training session, and in that busy space, players frequently did not register what was being said. As one player explained:

> Well, do you know if something is said in the dressing room, it might be about a game, or it might be that training might be at a different spot. You will get people who will say 'I didn't hear you' and off they go, and don't turn up. Whereas, like now, it is sent to the mobile. Everyone has the same information, and you can't say 'I didn't know'. (female, age 25-35, player)

Another advantage to the receiver is the fact that text messages are stored until the receiver elects to delete them. This means that the handset can be used to retain details of upcoming meetings, and the message itself can act as a diary entry. Ling describes this use of the mobile as a 'repository of personal history' (Ling, 2008b, p95), and it is a practice which is becoming more frequent as airlines text flight reference numbers to travellers, replacing the need for paper records. As one player remarked:

> It's easier to have a message on your phone, whereas, if you get it by post, you'll just leave it on the [kitchen] counter and forget about it. (male, age 25-35, player)

Interestingly, for such functions, it is the mobile phone's use as a piece of electronic technology (its data storage facility), rather than its use a communicator, which delivers these benefits to the holder.

Quite apart from the obvious advantages of group text to both sender and receiver, there are a number of other unexpected (and unintended) advantages. One is a

creation of inclusiveness and the consequent strengthening of group ties. Getting a message from the club regularly reminds each member of their part within the community as a whole. One interviewee expressed this: '… makes you feel inside the circle, like.' (male, age 18-25, player). This point was more pertinent for younger or newer members than for others whose role was assured due to their long-term team membership or local renown as successful athletes.

The promotion of equality is another side effect of the group texts. The fact that everyone is getting the same message at the same time is important to recipients, as it reassures them they are all on same footing. As one club player put it:

> It is good because everyone gets the same texts. There is no one better than anybody else, everyone is kept in the same loop, and you can't say you didn't get it. (female, age 25-35, player)

If such messages were to be delivered by a method which did not ensure simultaneous receipt, missing a person from the list or getting to them after they had already heard the message from someone else, could create resentments that they were being marginalised. Even the club committee members who sent the SMS were aware that they were creating important feelings of inclusion, and the delicate diplomacy ensuing. The chairman of one of the clubs acknowledged this:

> … people feel left out if they aren't informed of something, whereas if quite a few people are informed, and you are the one who is not, you'd wonder why, you know. You know, in other years, before mobiles, that was never a problem. … [now] they expect it. (male, age 25-35, club chairman)

The last piece of this comment also brings up another point. Before group texts were available, members accepted that messages could be delivered late or that they could be missed out in a complex relay system. Once this equity of information has been established in the club, ceasing it would have a negative effect.

Over all, the use of text from a mobile phone in all these scenarios works to bond the group and keep it active. As an extra communication line, it tightens the links to existing ties by providing an easy way to gather and organise. As a repository for contact numbers through the phone book, it widens one's circle and provides a ready means to maintain even loose ties.

> People are more informed, they are more up to date with, in our case, matches going on, that they wouldn't have known about before. Definitely communicate more, an awful lot more. (male, age 25-35, club chairman)

Although the use of broadcast SMS in the club has been positive in keeping the group together, there is a possibility that its overuse (or mis-use) could have an adverse effect. Just one interviewee mentioned dissatisfaction with the nature of the message she received:

> I would say that group texts are very impersonal. Say for example I get a text 'We definitely have training this evening at 7 o clock', people might ignore it, and say 'That's a group text'. Whereas if it was sent directly, 'Hi Sandra, make sure you train this evening', you'd probably pay more heed to it. (female, age 25-35, player)

Although her point is valid, the suggested alternative solution of a tailored message negates the reduction in administration burden engendered by sending a generic group message.

While welcoming the club group texts, club members had a more ambivalent attitude to information texts such as those provided as a paid service (usually referred to as 'text alerts'). Only 2 were subscribers, both receiving sports information. In fact several respondents quoted negative experiences, either their own or a friend's, where they had signed up for such alerts, but found the service expensive as they received more than they expected, and subsequently had difficulty signing off the service. The positive attitudes towards incoming club texts may be due to the fact that they know the incoming information is going to be directly relevant to their chosen leisure time activity and help to plan their week.

The texts received from the club are also free to receive. However, one might speculate that even these might possibly be unwelcome if they were too frequent or extended beyond what is deemed necessary information.

6.3 Changing patterns of club communication

Use of the mobile phone has brought two main changes to communication within the community groups: an increase in the number of linkages made overall, and the use of broadcast SMS messages (and laterally, social media) to disseminate information to the group as a whole. This has resulted in a number of outcomes recognised by the members themselves, in response to the question: 'Do you notice any particular differences in patterns of communications in the club now that people use mobile phones more?'

> ... a change in patterns?... yeah, there is, definitely, more communication between people, definitely. Since mobiles came in, definitely ...within the club, yeah, definitely, yeah. It's definitely in a positive direction, in my view. (male, age 18-25, player)

In-depth or lengthy conversations can be made when members talk in person, something which happens regularly (perhaps twice-weekly) during the playing season. The use of voice calls on club business is usually for essential communications that would have been previously made by land line. Texting, however, is an extra communication form for which there was no prior equivalent, and this is the main way in which members communicate with each other in between their face-to-face meetings. This multitude of communications between meetings helps to keep a complex network in place.

> It makes you feel that you can contact them easily, do you know, if you want to contact someone, yeah. It probably does in that sense, yeah, make you feel part of the group, you know. Such-and such a person has your number, and they can contact you, so in that sense it makes you feel part of the group, linked in. (male, age 18-25, player)

> We're probably closer all right, probably more communication, due to the fact that, again, if you are carrying your mobile around, and people say, oh he has his mobile, get in contact. Whereas other people would say, oh it's two o clock in the day, he won't be at home, he'd be at work, I don't have his number, so….(male, age 18-25, player)

Even when a text message is to make an arrangement, it often ends in a face-to-face meeting. The text links are short but frequent, but this does not make their effect any less potent:

> Well, like, if we were going for a drink at the weekend or anything ... that's one instance, I'd be texting a number of them. I'd be trying to contact a number of people, I just text. That's the main time I text. It's very handy then when you can just text all your friends and meet up, like. And I suppose the relationship is stronger, the more we see of each other. (male, age 25-35, player)

These feelings of inclusion and of strengthening relationships can create a synergy within the group, as recognised by one member:

> Everyone is a lot more friendly, actually ... Kind of a chat talking during the texting. Trying to organise a lot of things for weekends. You'd be texting a few of them to go out, and all the texting back, it is now, rather than going down, organising a night. Everyone's more involved, more excited with it. (male, age 18-25, player)

These outcomes all lead to a bonding of the group, simply due to the increased integration of their lives and regular points of contact.

The other major change in pattern is that generated by the use of broadcast SMS. These are a useful addition in the lives of both sender and receiver and have become an essential element in the running of the club. When asked about changing patterns, one player mentioned in a very clear way how getting these texts meant he could plan his week:

> There is, there is more contact with the phone. Just more, more, about games, and earlier in the week than there was before ... more calling, more text. Particularly ... when it comes time for matches, and we know from Monday, if you are playing on Sunday ... instead of waiting till the Tribune [local newspaper] on Thursday. (male, age 25-35, player)

This was a finding in both clubs:

> Well, there is way more communication there, do you know what I mean, because, like, I got a text there on the way down here, for instance, 'There is training this evening at 7 for there's a possible match on Thursday, everyone needs to attend'. You know what I mean. So from that point of view, we're saying this is the plan for the coming week, and everyone needs to come, so I think probably, definitely, we're in contact with each other more, definitely... Absolutely, yeah I think it does, keeps the team together. (female, age 25-35, player)

Another player described the group texts as making her feel more 'in tune' with what is going on.

The group text facility also has many advantages for the club administrators, as already documented. One player saw the benefits of this within her own household:

> I'm seeing it from a different perspective as well because my parents are both managers of various teams so they communicate by text messages, while probably a few years ago they would have done it through the house phone, would have rang the house phones to contact. So it all goes through text message now. (female, age 18-25, player)

Considering that all administration positions within the club are undertaken voluntarily, the group text facility eases the workload of those who undertake these posts. Such jobs as managing a team or serving on a club committee can put serious demands on personal time, and any tool which eases the responsibility is positive for the holder of the post. There is less panic in coping with last-minute changes, and this builds a flexibility into club affairs. Making administrator jobs simpler also makes them more attractive to new volunteers.

The possibility of using the MI has extended the range of ways clubs can communicate with members. In this the urban club are slightly ahead in that they are 'latching on' to new modes of communication faster than the rural club. There appears to be a pathway of change occurring here, a point which was noted by one player:

> It's moving in a cycle. I mean when *Facebook* started it was huge, and now *Twitter* has kind of grown and grown and now Michael's [urban club] has transitioned … Once *Twitter* finds its way into rural clubs it'll spread like wildfire. It'll be two weeks and every club in the county will have it, that's the way it works. (male, aged 18-25, player)

The 'cycle' appears to start with a website as the first internet presence. The rural club in my study has an extensive website with match reports, club history, outside links, accounts of social events, club history and many photographs. It isn't very professional in appearance, but is very current with the rich quantity of information it provides. The urban club, on the other hand, has a more passive site, which one club members suggests is 'more for people abroad or people who have just moved here. I think it's more of an advertisement at this stage, showing off what you have done, rather than a place where people go to communicate. '

The following stage of the cycle is the use of social network sites, firstly *Facebook* and subsequently *Twitter*. The rural club has an active *Facebook* site with almost 500 followers and a *Flickr* site with nearly 10,000 photographs. They have no *Twitter* presence. The urban club appear to be moving away from *FaceBook.* As one member states: ' … people in town they have been exposed a lot longer and they've gone past it'. They do, however, have a public *Twitter* account with almost 700 followers. This club are also using *WhatsApp*, mainly in closed groups, in the same manner that they use broadcast SMS.

All of these internet communication tools do not replace, but are used in addition to the group texts, with administrators copying the same message across the various media.

Another interesting aspect to club information being posted on social media is that fact that it provides public access. In this way those interested in GAA affairs can keep track of various clubs at the same time. This was evidenced from one player who is very active in the sports arena, playing hurling for one club, football for

another and is also on the county hurling team. He was aware of the social media presence of several clubs:

> St. Michael's [club], now they have a *Facebook* group, they have *WhatsApp* … in my local club Rahoon, it's *WhatsApp* for players …There's a 'Tommy Larkins [club] unite' page … I'm linked to Craughwall [club]… (player, aged 18-25, player)

The other internet use established in one club (although not specifically for phones) was the sending of a weekly news email to anyone interested in club happenings. This was done by one particularly enthusiastic member and was targeted mainly at those who had emigrate or left the area.

There was one final and unexpected outcome of smartphone communications in the clubs – its effectiveness in team building. One player described how players encounter difficulties in moving form a juvenile team (where all players in a team are of a similar age) to the senior team:

> There was issues in the past where there was a divide in the club when players came to the senior cycle … there are guys in their late 20s and 30s and then there are guys who are 19. … relationship gaps . Constantly there were meetings about what we were going to do and we tried trips away, but I found that [*WhatsApp*] was just as good as any trip away for the camaraderie that was in it. In my opinion it broke the barrier. It was a unifying thing. (male, aged 18-25, player)

Chapter 7
Mobile phone use in the community: analysis

This chapter brings together the strands of theory and reported practice by considering the findings detailed in chapters five and six and the consequences of these on the theoretical discussion in my literature review. These indicate that the changes wrought through technology are not a product of the artefact itself, but rather the process through which it is designed, implemented and appropriated – the domestication cycle. The club members have fashioned their mobile phone use to suit the flow of their lives – it is a tool equipping them with more choice over when, where and with whom they might spend their social time. In this chapter I reflect on my findings within the context of the research questions I posed in chapter three and the literature reviewed in chapter two.

My first research question looks at the process of adoption, specifically the influences of community group membership on phone acquisition and practices of use. Taking on a new technology when part of a close social group is different from doing it as a single user (Bakardjieva,2005). There are often existing users who will

help out in the learning stages, and there are models of use by others in plain sight. However, there may be other factors at play too. There are the social mores and expectations of use within the group, and also cultural influences they may exert over issues such as display and use.

Haddon sets out some of the core questions around mobile phone use and its domestication within social networks:

> ... we can at least pose the question of how ICTs such as mobile phones are domesticated within such social networks... For example, what are the processes by which ICTs acquire meaning within such groups (over and above the marketing of firms)? What, for example, leads mobiles or particular mobiles to become fashionable (or not)? What forms of negotiation take place within social networks and how do collective practices emerge? Are there rules about use and if so how are they policed? What type of subsequent career do mobiles have within a group context? In other words the general types of question one would pose within a domestication framework can be applied when trying to investigate how social networks come to consume ICTs. (Haddon, 2004, p75)

Since I chose to adopt the domestication approach (Silverstone and Haddon, 1996) as my framework for study I can now trace the path taken towards full integration of the phone within the clubs and answer some of Haddon's questions. I cover this in section 7.1.

My second research question focuses on the second articulation of the mobile phone, relationship management, both inside and outside the club circle. The ability to maintain a wide group of friends and acquaintances through their mobile device challenges users to find ways to keep all ties active. Relationship management is also a factor for the club as well as the individual, and the ability to send group text messages has radically altered the work patterns of club administrators. One particular outcome of this is the fact that they are, almost inadvertently, communicating community to the members through group texts. This has a consequential strengthening of bonds within the club. This is addressed in section 7.2.

My third research question turns to the proposition that a 'networked individual' will no longer have an interest in the maintenance of a F2F local community. The members of the sports clubs examined here certainly are actively engaging in a networked society, but the outcome suggested in the literature of a corresponding 'eclipse of community' is not evidenced in my findings. The links between communications technology use and social capital are complex and I explore these in section 7.3.

7.1 Mobile phone domestication

In my first research question I query individual adoption of the mobile phone in order to ascertain the experiences of my chosen cohort in bringing this piece of technology into their lives. Putting their adoption within the context of other accounts enables me to extract any atypical behaviour in how the members of the sports clubs have accepted the phone as a piece of new technology in their lives. I find that while adoption and diffusion patterns are similar to those found elsewhere, this group of users exhibit a lack of interest in their phone as an object of fashion and demonstrate little emotional attachment to it. Some differences in adoption and use exist between male and female users and between those living in urban and rural areas.

7.1.1 Diffusion and adoption of the mobile phone by club members

As described in section 4.1.2, the Irish population in general took to the mobile phone during the years 1998 – 2001, and this adoption pattern was reproduced within the two community groups. The commonly given reason for phone acquisition in interview was that 'everyone' had one, reflecting the mass movement at the time towards phone ownership. The 'everyone' here described would definitely have included early (and enthusiastic) adopters in the clubs who were willing to act as mentors to anyone interested. During this period of large-scale adoption there was a general shifting and settling among the population over accepted practices around when, where and how the phone was to be used and displayed. STS literature suggests that the taking on of a new technology can be an uncertain and traumatic event for the individual, but support from within the club eased this somewhat.

In the clubs, phone diffusion was aided by the gifting or handing down of a first handset. Even though this is not an aspect of adoption reported in many research studies (exceptionally, Stewart, 2007), it came up frequently in interview as a high percentage of club members (10/21) received their first handsets in this way. This

extensive gifting and passing on of handsets demonstrated that not only did existing owners think that having a mobile themselves was a good idea, but they thought that their family and friends might benefit too. It also gave newcomers an easy entry point into the market as gifting removed the initial considerations of 'Do I want a mobile phone? Do I need it?' from the adoption process, leading to an accelerated (compacted) domestication process. Those in receipt of a gifted phone would not necessarily have engaged in the *imagination* phase (of domestication), whereby they might have projected themselves as users; they also avoided the *appropriation* phase with its deliberation over which phone to purchase (although everyone had experienced this in their later re-appropriation of a replacement model).

Those who did buy their own phone often called upon members who were already owners for advice on which model to purchase. In this they were being influenced by *opinion leadership*, the term used to refer to the passing of recommendations by interpersonal word-of-mouth communication. This informal market of derived knowledge is an experience well recognised in marketing literature:

> ...it is not surprising that opinion leaders and opinion receivers often are friends, neighbours, or work associates, for existing friendships provide numerous opportunities for conversation concerning product-related topics. Close physical proximity is likely to increase the occurrences of product-related conversations. A local health club or community centre for example, or even a local supermarket, provides opportunities for neighbours to meet and exchange informal communications about products and services. (Schiffman and Kanuk, 2000, p406)

The type of exchange described here is one which many potential purchasers might trust more than the technically-infused language and marketing-speak they would encounter in a phone shop, and it can give confidence to decision-making for the novice user.

Fellow club members also acted to support the *observability*[63] and *trialabilty*[64] aspects of the diffusion process. Rodgers states that 'the [observability/ trialabilty] of an innovation, as perceived by members of a social system, is positively related to its rate of adoption' (Rodgers, 1995, p244). Group members saw their friends overcoming problems and watched interactions by others before purchase. They could also trial being a user by borrowing someone else's handset for a short period. The evidence of handing down a phone to someone else when upgrading to a new model also enabled a cheap and convenient trial. In this, potential purchasers are calling on the social capital of being members to ease their passage into becoming new users.

Since mobile phone use was generally a novelty at the time, there was frequent open discussion about the advantages and problems of being a user. Evidence of others using their phones showed that that any technical challenges could be overcome and friends were on hand to help with explanations of use and advice on topics such as tariffs and roaming. The availability of advice would be particularly true for those who had received a 'handed down' set, as the original owner was often close by. Once the new phone is purchased and switched on, and others learn of this, the process dictates itself. Friends and family will readily pass their number on and call or text the new owner, bringing them into the circle of users. Even those who passively begin by being receivers of messages are made senders by the social obligations to respond. When a critical mass within the community group were communicating through their mobile phones, anyone who wasn't was missing out on social exchanges, so late adopters came under some pressure to join existing users.

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[63] Rodgers defines *observability* as 'the degree to which the results of an innovation are visible to others' (Rodgers, 1995, p244).

[64] *Trialabilty* is the degree to which an innovation may be experimented with on a limited basis (Rodgers, 1995, p251).

Whether a curtailed process due to being given the phone, or a deliberate decision on behalf of a purchaser, personal domestication of the mobile phone did not see the 'moral negotiations' evident in early domestication studies which were focused on bringing a new television set into a household or family adoption of a home computer (Silverstone and Haddon, 1996; Haddon, 2006). When considering a relatively small purchase for personal use, it is the individual who holds the choices and the ongoing spend on phone calls and texts is from one's own personal finances. Looking at the age of the recipients at the time of acquisition, it appears that almost half the members (9/21) were still teenagers when they acquired their first phone, and one third of handsets (7/21) were gifted. This fits patterns of young people being early adopters and possibly also supports the findings that parents were inclined to give their children phones as an 'electronic leash' (Ling, 2001a, 2004b). In this instance while the choice of a gifted set may have been that of the parents, they are in effect bestowing choice over relation management to their children.

7.1.2 Mobile phone meanings: integration and incorporation

Early adopters were subject to teasing about being phone users as the image of a typical user was firmly rooted in the projected model of a wealthy business man, an image with which these sports club members did not identify. This soon no longer became the case and club members considered phone ownership a necessary but slightly problematic part of their lives. Incorporation within the club is now complete and phone ownership is considered of no great note. However, evidence from the interviews shows that there remains a slight stigma attached to ownership in that some users feel the need to explain away their consumption patterns by belittling its place in their lives.

Much other research describes users viewing the phone as a status symbol or a public demonstration of who they are (for example Katz, 2006; Ling and Donner,

2009; Castells et al., 2007) but this was not what I found in my study. Only a few club members mentioned that they cared which model they used or what the handset looked like. In fact the flip-up phones which were fashionable at the time and were heavily marketed were considered to be too easily broken; small sized phones were also seen as fragile. Club members were nonchalant when they were asked to describe any meaning the mobile phone might have in their lives, and this is reflected in their reported active practices (such as not immediately reading an incoming text message) which might demonstrate that they are not dominated in any way by the technology.

Much has been written on the appearance of mobile phones, but fashionable phones were something in which club members had little interest. Some models of phone have been marketed as if they were an item of jewellery - as befitting an artefact which has been described as 'a body part' (Oksman and Rautiainem, 2003). However, none of the club members admitted doing anything to enhance their phone and they appeared rather indifferent to phone fashion, with no one expressing the opinion that the age or size or make of their phone said anything about themselves. This disinterest in fashion is not reflected in other parts of their lives, in fact female players in particular are very glamorous off the pitch. While they might dress to express their femininity (as they are playing what would traditionally be considered a male sport), they don't apply the same fashion attitudes to their mobile phones.

Fashion may also be expressed either through the particular model which one buys, or how one personalises it by coloured covers or ringtones. Research describes this as an active form of producing meaning by the end user (Castells et al., 2007, p111), and Katz also sees it as projecting beyond the role of being a consumer:

> ... users are more than mere consumers. They are also co-creators. They achieve this status by further manipulating mobile devices after purchase to reflect personal tastes and to represent themselves to the outside world. (Katz, 2006, p84)

Some members had chosen a ringtone which varied from the standard supplied, but this was the extent of their tailoring the artefact. One explanation of this variation from other reports could be the fact that much research to date has been done with urban youth, while the club members were slightly older (ranging in age from 18 to mid-50s) and had other priorities than fashion when buying a phone.

The desire for a device simply to make calls and send SMS *only* was reported by many in response to the questions on extra features or multi-functionality of phone sets. Few had used their camera, or had this as a requirement when they bought the phone. The majority were well versed in the current trends in mobile phones, as evidence by their knowledge of 3G, but had already evaluated this as an unnecessary and possibly expensive addition. These groups certainly have opinions on what they do or do not want from their phones (which might differ from marketeers or conflict with designers) and are very pragmatic in their wishes. It may be their slightly older age group which accounts for their lack of interest in more 'gimmicky' features, and also their desire for a good service model overriding other aspirations.

Looking back on these attitudes from today's perspective where smartphones are becoming the norm, it can be seen that much of this reticence has disappeared. Camera technology has improved and taking photographs in public using a phone has become ubiquitous (especially the self portrait 'selfie'). 3G technologies have also become the norm and it is very easy to integrate photographs into multimedia messages (MMS) and apps, and then distribute these through social networks. This is perhaps an instance where what is considered a special feature in early forms of a technology becomes a standard in later models and extensive public usage of camera phones has now made them mainstream.

What members of the community groups did wish for was an easy-to-use interface, and many respondents when asked what they would look for in a new phone replied not with a sophisticated feature, but rather with the brand name (Nokia), as this was the product with which they were familiar and which they trusted. They also expressed the desire for a sturdy object with which they could make voice calls and send text messages. Club members looked for stability in the artefact rather than new trends. Many of them were familiar with Nokia's operating system so the software was more important to them than the hardware.

For all of those interviewed, the phone had passed into the realm of being a necessity rather than a luxury in their lives. When asked about their reactions to being without it for a month, all expressed their angst due to loss of the functional aspects of the phone – how might they keep in touch? A number told stories of losing or breaking their phone and the dilemmas ensuing. However, this was balanced out by a following statement that they were sure they might cope after a period when they had put some alternative communication plans in place. The initial response may have been panic, but on reflection, they were loathe to consider that the phone might have some control over their lives.

One other aspect of the research literature which was only partially supported by the findings within these groups is that of users developing emotional attachment to their mobile phones. There was no acknowledgement by any interviewee that they had an emotional bond with the phone, or any overt attachment to it. In several interviews the question 'How do you feel about your phone?' was answered with a request for clarification, as if the phone itself could not induce feelings. My response, 'Is it important in your life?' usually gave rise to descriptions on the usefulness of the device, and this emphasis on the functional aspects was supported by the described difficulties which one might encounter when asked if they were to do without it for a month. This is contrary to Vincent's finding that 'It offers a way of showing and sharing identities, of outwardly expressing and displaying one's

personal image and of demonstrating affiliations ... the mobile phone now has multiple roles in the presentation of the self of the user' (Vincent, 2009, p202). In my study the import of the phone is based more on pragmatism than on emotion. What were important to respondents was the contents of the phone, the numbers held in the phonebook.

The issue of the role of the mobile phone in saving time and travel was evident in many interview responses, mirroring findings in other research (Ling and Campbell, 2009). Some respondents interpreted the time-saving to refer to the fact that they used text rather than voice calls which engendered a much shorter interaction as it could eliminate 'small talk'. However, when asked for an anecdote about the matter, everyone was quick to recall an instance by which some task in their lives was eliminated. This often was due to not having to travel, perhaps by having someone bring something to them or not having to go and meet another. Similar patterns which help the minutiae of daily life have been reported by others, including papers on how parents of a young family coordinate family life and childcare using their mobile phones (for example, Ling and Yittri, 2002). Stories on use of the phone to save travel were often in the context of club activities, where an incoming text might mean that they no longer had to travel to an event that had been postponed or changed. The rural club is situated in an area with poor public transport infrastructure and an ageing road network, making travelling tiresome, so saving travel is of particular benefit to rural dwellers who are dependent on private transport in travelling to meet others. The phone also enables everyone to be more flexible in their personal arrangements, and not refuse other social outings 'in case we had a match'. This flexibility in the organisation of daily life is something they have all come to expect.

7.1.3 Problems in using the phone and their solution

Carrying a mobile phone provides users with choices on which they can act immediately, for example whom to contact in any given situation. However, the

choices over using mobile phones are not totally free, as they may be moderated by external forces such as social mores, having credit, dealing with PRIVATE NUMBERs, or having a strong signal on the phone. How users respond to these limitations or find a work-around to them reflects both frustration and ingenuity in meeting the expectations for perpetual contact. There were four main areas where club members found difficulty with their phone use and they felt the need to exert control strategies. Two of these, cost and telephone etiquette, are well recognised and have been written about elsewhere (as reported in section 2.2). The other problems, signal strength and PRIVATE NUMBERs, were equally acute inconveniences to those concerned, and have not been acknowledged in other studies.

As already mentioned, the average monthly spend on mobile phones in Ireland is among the highest in Europe. While everyone interviewed believed that using the mobile phone is an expensive alternative to the fixed line[65], no one was aware of the fact that the Irish spend was higher than elsewhere. At the time of the first interviews, the majority of Irish consumers (75%)[66] and of the interviewees (13/21) used a pre-pay method of dealing with call charges, and although this might have a more expensive cost per minute, they believed that this was a way in which they could keep control of their usage. While some reported availing of special offers and tariffs by their carriers, no one had sought these out specifically to reduce their own costs[67]. Other studies have reported sophisticated strategic techniques such as users

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[65] This fact is universally recognised. The MobileUK report states that: '…our research suggests that those who do not read their phone bills are likely to be highly unusual. Cost remains a highly significant issue for the majority of users, and often defines their relationships with their phones and networks. This relationship with expense begins at the moment of purchase, but also has far-reaching implications for the way people use their phones day-to-day.' (Crabtree et al, 2003).

[66] ComReg(2007).

[67] There were gender differences in phone spend and this is dealt with in section 7.1.4 below.

carrying a number of phones and maximising the free talk time of different networks (Crabtree et al., 2003). However, the interviewees here employed simpler solutions such as using texts rather than voice calls, or using a phone as a pager - e.g. 'three rings means collect me from the bus'. No one stated that they had stopped using their phone for a period or that they were attempting to communicate less because of cost. The mobile phone has obviously established itself as an absolute necessity in the lives of these groups, to such an extent that they were going to continue to use it even if it was a financial demand on their pockets.

The mores around when and where it is acceptable to use the mobile phone in public is an issue which troubles many societies (see section 2.2). This was widely acknowledged as a problem by club members, and some people admitted that they became so uncomfortable when they received a call in a public place that they ignored the incoming call. At this time, there was still some negotiation over when and where it was appropriate to make or take a call when in the company of others, and everyone acknowledged that the issue was not clear-cut. The club members all had their own personal standards on this and were peeved when others did not adhere to similar behaviour. It was accepted by all that use when driving was unacceptable and possibly dangerous, although many admitted finding it very distracting and difficult to ignore an incoming call while in the car. Since the time of interview there has been legislation in Ireland banning drivers making mobile calls, but the number of prosecutions is high, indicating that although they may recognise it as wrong, many give in to the temptation to do so. Taking a call or texting when in company also was reported as irritating to the co-located, but since contact anytime, anywhere is the raison d'être of mobile phone use, it is unlikely that this will cease.

The lack of signal strength to enable a quality voice call came up frequently in interview, although the question was not asked directly. There is a requirement from the communications regulator in Ireland that a minimal geographic coverage must be provided by those granted a licence to operate. While high (up to 95%) this

is not universal, and some more remote regions may still experience patchy coverage[68]. Rural dwellers felt particularly vulnerable in this respect and considered location of masts an important factor in choosing their carrier[69]. A number of interviewees mentioned a website provided by the communications regulator which specifies these details on a map, and this was a topic of frequent discussion and advice within the clubs. This issue is exacerbated for rural areas when it comes to 3G or 4G services, and may be a contributor as to why rural clubs are slower to move through the 'cycle' of media as described in section 6.3. Those living in more densely populated urban areas (and around whom most research in the field has been centred) possibly do not need to consider signal strength, but it was an issue which dominated phone use for rural users and which they had to actively manage. It may be an economic choice for the smaller provider companies in particular to focus on areas of higher population density, but perhaps a stronger government policy on universal coverage could ensure problems such as this are never an issue.

The other surprising finding was that of the dislike and avoidance of interviewees around the message PRIVATE NUMBER appearing on their screen. This subject came up repeatedly, and unasked for, and many expressed their irritation. These 'spam' calls interrupt the routines by which users manage their acceptance of calls and are somewhat out of their control. The rather drastic reaction of not answering such calls (which was employed by a number of respondents) means that the

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[68] The communications regulator advises subscribers to take note of coverage before signing up for a service: 'Each mobile network can have a different coverage area, depending on the number of mobile towers in use, the local terrain and technology used. It is important to check that the service you are considering has good coverage where you expect to use it most. Ask your mobile operator if they can provide you with coverage maps that can assist you in determining how well the areas that are important to you are covered. Alternatively, check with your friends and family who use the same mobile phone company in the areas you want to use your phone, to confirm that the coverage is adequate in that area'. www.askcomreg.ie (accessed 2nd October 2013)

[69] http://www.askcomreg.ie/mobile/siteviewer.273.LE.asp

receiver may be missing out on benign messages sent through a PABX. The fact that the respondents had a (possibly erroneous) interpretation of such calls is evidence of a little knowledge being a dangerous thing. Perhaps some companies might revise their practice on what their internal telephone systems display on handsets were they aware of the strong reactions which this message evokes.

Much of this study is concerned with how use of the mobile phone impacts on group dynamics; however we can also consider how group dynamics has influenced mobile phone use. The one overwhelming success for club life which is enabled by mobile phone use is the ability to send and receive broadcast SMS. This happening in *both* sports clubs examined in this thesis was somewhat surprising, as it is not a feature which is promoted particularly by the service providers. The provision of SMS was not a scripted use of early mobile phones, which were targeted at a business user, but rather a use which was 'discovered' and then exploited by young users, and consequently written into the device by the manufacturers. This user led discovery process also appears to have happened with group text sending as the clubs are geographically distant and independent in their administration. By using the phone-based distribution list as a simple database to ease the burden of communication in their clubs the administrators are performing another example of Haddon's 'acts of innovativeness' by non-elite users (Haddon, 2005).The broadcast facility is already provided; it requires only incorporation into a work pattern by the end user – a change in the domestication phase of the product. In this, the community organisers form new 'constructed users' (Silverstone and Haddon, 1996, p45) emerging from the consumption cycle of the artefact.

7.1.4 The demographics of phone use

There were a number of potential factors shaping uptake and use I wished to account for in my investigations, specifically any differences in use between urban/rural dwellers, and between male/female users. For this reason one of the

clubs was in a rural area, the other in an urban one. Those interviewed from the urban club were players and administrators from their female football team.

The fieldwork for this thesis was undertaken during a period of rapid adoption of the phone and the evidence is that women generally were not early adopters. In fact, in the club interviews, only one woman had owned a phone before the peak purchase period 1999-2000, and this was given to her by her parents as an electronic leash as in the model already described (Ling and Yittri, 2005). Only one female club member had actually purchased her own phone, all the others had received theirs either as a gift or handed down when someone else upgraded to a newer model, a process which was common only after the initial cohort of early adopters were established. Less than half the male respondees received their phones as gifts or hand-downs. Sørensen's description of a 'wife mobile' similar to a 'wife car' as quoted in section 2.2.3 rings true here, and I found a stark example of this with one married couple (both managing club teams) whom I interviewed. She had bought a phone as a gift for her husband, and when he upgraded to a newer model, she received his original phone as a handed down model. This is a clear example of the 'moral economy of the household' found in early writings on domestication (Silverstone , Hirsch and Morley 1992).

Women also appeared to be more cautious in the amount they spent on their phone usage. In my study I found that the male average spend was €60 per month, and the female was €42 (matching the national average). This is a significant difference in value, although I did recognise during the interview process that there were a number of the male users who had attributed their high use to the fact that they were self employed and depended on the phone to manage their work schedules. I removed those whose consumption used more than twice the monthly average (all male) as outliers, and found that the differential was less, but still showing males as higher users (male average use €47 and female €42). I don't have enough evidence to determine the exact reasons why this might be, but it certainly goes counter to the

patterns recognised in early fixed line use where women spent long periods 'chatting' on the telephone and men used it for instrumental calls only (Fischer,1992). The female interviewees in my study did appear to be more cost conscious as they all reported using methods to curb their spending, either by changing tariff or using text messaging in place of making a call. Only a quarter of the men stated that they did this, suggesting that women are more careful in budgeting their phone use.

It might be considered that rural dwellers would have a specific interest in mobile phone adoption. They would traditionally have been more isolated than their urban counterparts, and living in a sparsely populated area might bring about a greater need to be able to communicate easily. Since there is a decline in agriculture generally in the country[70], many now work in nearby towns and live a lifestyle very similar to those of their urban counterparts, just played out in a rural setting. For these, the balancing of a busy life provides extra challenges and an added complexity with decisions over phone use. The public transport infrastructure is poor in Ireland, and most rural dwellers are dependent on a car for all resources, so the saving of time possible with a mobile phone is an advantage. In fact among the most common messages sent by text among those rural-dwellers interviewed was the reminder 'don't forget to bring home bread and milk', and 'you can come now and pick me up from town', communications not so easily relayed in the period prior to mobile phone use. While such messages might also be sent in an urban setting, the presence of public transport or grocery shops close by meant that the import of these messages was not as acute.

[70] Employment in agriculture reduced from 17% to 5% in the period 1985-2011. http://www.tradingeconomics.com/ireland/employment-in-agriculture-percent-of-total-employment-wb-data.html . (accessed 9th July 2013)

Rural users do appear to be much more extensive users of their phones than the urban cohort. While it is difficult to gauge the extent of this exactly due to the myriad of different tariffs in use, the reported spend for rural users was €56 per month, while it was €42 for urban dwellers (closer to the national figure). These figures are also compromised slightly as there were a number of high spenders (over €100) in the rural group which they explained was due to their work as self-employed builders. Removing these outliers brings the values closer, although the rural value is still higher (rural €45, urban €42). Evidence does point to rural inhabitants having a higher dependency on technology in order to carry out a lifestyle similar to their urban counterparts. It could also be a sign of the friendship patterns mentioned earlier. In the rural club members often know each other since primary school and often have both friends and family in common, making them a tightly bonded community with a large number of very close ties whom they contact regularly.

7.2 The second articulation: relationship management

Research question two looks at the way in which community members perform the second articulation of the mobile phone – relationship management. Here I find that calls and texts are made mainly to friends and family and that through careful management the members support two distinct sets of communicants whose details are in their phone book – those who are close (an inner circle) and those less frequently contacted, an outer circle. Using devised approaches to handling calls and callers, individuals have developed techniques to manage their time and balance their activities with a wider group of contacts and over a more extensive terrain.

Relationship management within the club is eased by the use of broadcast SMS messages and this also lends a flexibility to club affairs and creates cohesion between members.

7.2.1 Managing personal relationships

Both those interviewed and the questionnaire respondents reported mobile phone use to be their dominant method of communication with others. Despite concerns over its cost, talking on the mobile phone was the most prevalent method to link with the closest categories of communicants (family and friends). This was followed closely by texting, and then by face-to-face communication. Having the mobile phone to hand at all times means that it is the most convenient and instantaneous way to make contact, with least effort for the communicator. The quantity of calls made by club members was high, with a large majority reporting that they made several mobile calls and sent several texts per day. These figures are in line with the high Irish consumption figures already mentioned in chapter four.

Within the interviews I was able to query more closely the changing communication coverage of the club members. For everyone, the extent of their important relationships was defined by the size and content of the phonebook entries held on

their handset. The phonebook directory is a very valuable asset to users, and gives a specific importance to the handset far beyond its aesthetic or financial value. The practices described around gathering numbers for inclusion appear very informal, with gifting of numbers happening even with casual social contacts, number exchange being almost like a statement that you have enjoyed meeting someone. Swapping mobile numbers is something that is done very casually within the wider GAA community, for example, with anyone who strikes up a conversation or shares interest in the games. Collecting numbers in this way expands one's circle of friends by keeping these more distant connections in range[71]. Prior to phone ownership, more peripheral acquaintances may have been un-contactable and chances of retaining/renewing the friendship lost.

In describing their collection of phone numbers the club members recognised that there is an inner and outer circle of friends, both held in the phonebook, the inner circle being those whom they might contact regularly and deem friends, then an outer group who might be termed acquaintances. In acting as a gateway to a double layer of friends in this way the phonebook defines the total social network of many users, and could be considered a form of personal 'e-social capital'. The respondents were able to maintain both inner and outer circles of friends captured in their phonebook and continued to give order to these different types of contact. This opens up a wider range of choice in managing relationships.

This outer circle is less likely to be encountered in everyday life, and so requires some work to keep in contact[72]. Instances of using the phonebook deliberately to

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[71] One team member describes getting the mobile phone number of players on opposing teams, and has greatly widened his circle of friends in this way.

[72] One person mentioned that in idle moments she goes through her phonebook and sends a short text to those with whom she may not have had contact for some time just to 'check in' and catch up with any news. Similarly, two interviewees who had studied in Dublin and had a set of friends there stated that they now use text messages to keep those contacts

maintain friendships with those in the outer circle (by periodically scanning thorough contacts and sending a 'catch up' SMS to the outer circle) means that one's whole social network can be kept active with minimal effort and without having to engage in any deep or meaningful conversation. While there was this recognition that their circle of friends had become wider due to new inclusions in their phonebook, there was also an acknowledgment by interviewees that it had also gotten closer. This seemingly dichotomous statement reflects the differing relationships held with the two sets of contacts, inner and outer. The inner set of friends had become closer, as they were now in range of 'perpetual contact', while more distant friends of the outer circle had come within the scope of easy contact and had increased in number. The key difference might be reflected in the regularity of use of each set of numbers.

The use of social networking through smartphones may be easing the difficulties of keeping in touch with the outer circle as one can there learn about events in friends' lives without making direct contact (and vice versa).

The media chosen for social interactions is in some ways dictated by the content of what is to be communicated, and text is used by club members for short interactions between regular face-to-face meetings. Since players see each other every few days during the season for training and matches, more extensive conversations can wait until then, and the SMS messages sent in between are keeping their link alive. They use text in that they might send a message directly to the person concerned, obviating the need to talk to someone else if the recipient was not at home to take a fixed line call, but also because, since they are meeting soon in any case, a phone conversation is not necessary. Members also referred to using SMS on a night out when constant texting enables them to keep track of where in town different sets of

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active. Another member described including his outer circle when inviting people to his birthday party.

friends might be. Text messages in this type of scenario create links that would otherwise not have formed at all.

SMS also enables independence in that it can provide a support for us when being alone. It enables us to send and receive a message without the sound of our voices disrupting the public sphere, and being a written (and read) message on a small personal device renders it the ultimate private communication – for your eyes only. This means it is often used to send surreptitious messages which are similar to an 'aside' in everyday talk, such as a passing comment on an evolving situation. Giving an update on what one is doing in this way would not be considered a strong enough reason to make a voice call, but it is suitable for an SMS which is here acting as a substitute for what might be said if the persons were together. Such messages can have a 'feel good' factor for both sender and receiver, the former feeling supported by having a friend within reach, and the latter being made aware that they are being thought of and are being brought into all aspects of the other's life. Using the mobile phone to give regular updates on progress in this way keeps the other literally at hand, perpetuating connectedness.

People use their mobile phone to discuss work, to chat with friends, to contact the doctor or to order a pizza, and it is the same phone which receives all these types of call too. The last 10 calls data which I gathered from interviewees shows this starkly. Although all the interviews took place outside working hours, and the phones were bought for social use, 9% of incoming and 12% of outgoing recent calls were work related (see Last Calls Data, Figure 20, section 5.3).This blending of all communications through the same device means a crossing of the boundaries to the different worlds we inhabit, in particular those of work and social life.

While the mobile phone offers the freedom to roam with the comfort of never losing touch, it also has the ability to interrupt times when we would rather be left alone either to complete a task in hand without the distraction of a phone call, or quite

simply to have some 'personal space' without interruptions[73]. Caller ID provides an immediate decision point as to whether to take a call, although if one decides not to, it may be necessary to have an excuse at hand[74] as the fact that the handset records missed calls means one can't simply say they didn't respond because they didn't hear a call. Not many of the interviewees admitted to ignoring calls, in fact about half stated that they never refused incoming calls and many of the others qualified any refusal with the defence of the problem of PRIVATE NUMBER calls as already discussed. The peer pressure which requires acknowledgement of a call here influences their decision to answer.

7.2.2 Managing community relationships

At the same time that the club members as individuals adopted the mobile phone into their everyday lives, it also became an integral part of the life of the sports club to which they belonged. Activity within the community was just an extension of everyday life, so it too was woven into the evolving new communications patterns already described. There were some specific uses which I anticipated around the sports clubs –use by management for arranging fixtures, matches and meetings, and possibly the use by players and supporters to discuss their performance in recent matches. However, the overwhelming success of the phone for club life is that of the use of 'group text' messages - broadcast SMS.

Broadcast SMS offers an easy and fast way of sending a standard message to a large number of people and is a key instrument in passing messages to club members. Uses described in both of the sports clubs demonstrates new possibilities in keeping

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[73] A very evident example of this was found by Ling in his investigation of teenagers who were given a mobile phone as an 'electronic leash' and who didn't respond to the incoming calls to check on their whereabouts (Ling, 2004), the very reason why their parents allowed them both the phone and the freedom to roam with it.

[74] Common excuses include: 'I had no credit', 'My battery was dead', 'I was out of range'.

their members informed and together and ensures the smooth running of the club in a way which neatly fits the lives of both sender and receiver. Broadcast SMS is a feature offered by both handset manufacturers and service providers, so it is not surprising that the club administrators might use it to communicate with their members. What is perhaps unexpected is that the wholesale adoption of this way of using the mobile phone has had a fairly radical change in the overall patterns of club communication and has caused the clubs to shape their work practices around it. Also significant is how its enthusiastic acceptance by club members has had a positive effect on the dynamics of the group as a whole, a fact which makes its presence now a necessary part of club interaction.

Using broadcast SMS not only ensures the members won't forget a meeting; it also gives flexibility to the organisers around arrangements. In the past, changes such as training at a different location, or new timing for a match would have meant the team manager trying to contact a large number of people in a short time, and calling off a session in the case of, say, poor weather, was not undertaken lightly. With group text, everyone can be informed of any changes directly and quickly. There is a guarantee that a message is delivered directly to the targeted person, with no need for an intermediary or the small-talk which is part of the social protocol of a voice call. This saves time for the sender, and an assurance of consistency in the message received. Overall, this means less panic for last-minute changes, and builds flexibility into club affairs as they are more easily able to respond when things don't go according to plan.

The range of additional methods available to communicate using a smartphone means that administrators can tailor their message to different audiences. The general public can view a website or receive an email; club members can keep up with news via FaceBook, and players can be contacted in a closed group using broadcast SMS, social network sites or specific mobile apps.

A consequence of mobile phone use is the reshaping of the work patterns in clubs in ways which ease the burden of the voluntary posts required to keep the clubs active, and this is a factor which should encourage more members to consider offering their services. Use of the mobile phone as a work tool in this way is unusual, as SMS is generally not considered to be suitable for administrative work. In one of the few studies on this topic, Svendsen et al. compare the use of SMS and email in office environments in a Scandinavian town (Svendsen et al., 2006). The authors conclude that SMS as a tool does not align with work practices in the way that email does, citing the fact that most people carry only their personal mobile phone, and prefer to use fixed line phones (paid for by their employer) rather than take on the added cost on their own mobile account. In the GAA clubs, administrators are regular club members who volunteer their time and energy to the club, taking on their post usually for one year. When doing this voluntary work, they do not use a club-provided handset, but in effect also volunteer the use of their own mobile phone, and personally pick up any costs that might accrue through sending the messages. Although they may have purchased their phone for social (recreational) use, they are actually adopting it for club work. In interview, no-one mentioned the added personal cost of keeping in touch with club members, probably because currently broadcast SMS is offered as a cheap feature[75] (multiple sends for a single price, or with free access through the internet).

For a turnover of administrators, which can happen annually in the clubs, broadcast SMS has some slight disadvantages as an effective work tool. To use the free group texts facility through a website, the phone owner must first log on using their own account details to set up a user profile. When they enter the names to be included in the group text, they set up a group which is only accessible through this profile – unique to their account. Thus, if a manager sets up the names of 30 players onto a

[75] One interviewee did query 'How long can this [free access] last?'. (female, age 35-45, club secretary)

list entitled, say, 'senior players', and then resigns their voluntary post at the end of the year, they cannot easily pass on the details to the next manager - all numbers must be entered again. Similarly, if they use the operating system of their own handset to set up a distribution list, they cannot easily move this to the handset of an incoming manager when they resign, but have to spend some time to ensure the incoming person has all the numbers they require. As a work practice, the use of personal mobile phones in this way means that the data is 'owned' by the phone owner, not by the entity on whose behalf they are doing the work. One solution might be to set up a club mobile phone held by the current holder of the post of secretary. This is not currently happening in either club. When a member volunteers to take on an administration post, they also in effect volunteer their mobile phone as a work tool. As one member commented:

> It's totally voluntary. That's the beauty of the GAA in a nutshell. It's very volunteer-based. If you tried to pay someone they wouldn't take it. (male, aged 18-25, player)

One other interesting point comes up here when considering the use of broadcast SMS for work purposes. The largely deterministic view that technology *replaces* workers is here being refuted in that the jobs these volunteers do are not being replaced, rather they are given the opportunity to be expanded due to the post holders being liberated from a monotonous chore. The essential message is that communities need people and this facility may encourage more to come forward.

For the club members who receive the SMS, the distribution of group texts to their mobile phone has saved time and minimised travel, while strengthening their ties to the group. Members of both clubs are enthusiastic and quote instances of how it provides new opportunities to them in how they can plan their lives around club affairs. However, it is the administrators who see most benefit in the use of group text. The job of managing a team or serving on a club committee can put serious demands on personal time, and any tool which eases the responsibility is positive

for the holder of the post. Making administrator jobs simpler and thus more attractive to volunteers is beneficial to the club as a whole as a turnover in personnel helps to maintain enthusiasm and gives voice to representative contribution by members.

> …community itself must mean more than just a common bond between individuals or a sense of belonging and obligation to others ..[it must] mean in part democratic community in which members of the community or the club have a real say over decisions affecting them (Jarvie, 2006, p331)

There are some potential limitations on the use of broadcast SMS, as already mentioned in 6.2.2. In future, club administrators may need to be careful that they do not over-use the broadcast SMS facility otherwise they may be viewed as monitoring rather than reminding members of their obligations or too many messages may make recipients ignore the incoming texts. They may also need to be careful of the style in which the text is written, as a terse directive has the potential to distance rather than bring members close. It has been acknowledged by club members that they do not like paid service text alerts and are wary of unsolicited calls, so the fact that the texts are currently welcome breaks a pattern in behaviour. Currently it is acknowledged that, since the sender is doing a voluntary job, and one which may be taken on by any of the recipients in the future, these communications are not seen negatively, but are viewed more as providing an aide-mémoire than an order.

There has been little reported in other studies on the use of broadcast SMS and in fact this feature does not appear to be available on all networks or handsets, or provided by all carriers[76]. However, it is a valuable contribution to club interaction.

[76] Although a GSM standard, not all operators have the Cell Broadcast messaging function activated in their network yet, and many handsets do not have the capability to support cell broadcast.

7.2.3 Communicating community in the clubs

The two clubs studied were in existence before the widespread use of mobile phones and have always needed to have extensive contact with their members to organize activities and inform them about fixtures and results. While face-to-face meetings are, and will remain, the key way in which the clubs communicate and maintain their solidarity, the finding of this research is that they have integrated mobile phone use into their communication patterns in innovative ways in order to help run and successfully operate their sports clubs. Regular meetings are the cornerstone of local community interaction, but the mediated links afforded by the mobile phone can help to keep it active when members go their separate ways. Mediated interaction is here enhancing the broader co-present forms of interaction and also functions in its own right as a means through which members of the group can engage one another and develop a common sense of identity. Indeed '. . . the directness and ubiquity of the channel can lead to a tightening of the social bonds within a group.' (Ling, 2008b, p119)

For the individual club members, the mobile phone is used as a mediator to maintain and promote the links that bind them together. They have woven use of the mobile phone into their own personal social lives, which of course includes their sports activities. The most intense and productive forms of interaction among the club members probably occur in face-to-face interactions, when they are engaging in and discussing their shared love of and interest in the games they play, and such everyday talk can develop a quality and depth to relationships. Beginning with a shared interest of sport, common interests can spill over to other parts of life and often regular social friendships are made through the club. The multiple short links provided by regular text messaging and short mobile phone calls keep these contacts active in the periods between club events and in the non-playing season. The more the group members interact with each other, the closer they become, tightening their social circle. This was exemplified in the statement "you'd be closer to friends you'd have known for years".

The biggest change to club communication has come through the practice of using broadcast SMS as a communications medium. This has changed the patterns of behaviour of both regular members and club administrators, and has had a number of beneficial spin-offs for the club as a whole. Members get updates in club news directly and accurately, irrespective of their personal circumstances or location and they know that the message content will often save them time and travel. They generally appreciate these notifications and judiciously save them in their mailbox as reminders. Receiving messages engender feelings of inclusion and reminds each member of their part within the community as a whole as well as helping them to organise their personal lives. The group texts also have the effect of promoting equality within the club. The fact that everyone is getting the same message at the same time is important to recipients, as it reassures them they are all on same footing. Often small organisations have their own internal politics which can stifle growth and cause dissension. Openness with information sources is one way which can limit the cause of such friction. Before group texts were available, members accepted that messages could be delivered late or that they could be missed out in a complex relay system. Once this equity of information has been established in the club, ceasing it would certainly have a negative effect.

For the club as a community, use of the group text feature has many obvious advantages. There is a guarantee that the message is delivered directly to the targeted person, with no need for an intermediary or the small talk that is part of the social protocol of a voice call. This consequently means less panic over last-minute changes, as they are more easily able to respond to changes in match arrangements, and so builds flexibility into club affairs. Sending group texts also saves time for the sender and ensures message consistency compared to making multiple voice calls. Since this is work done by a volunteer, the ease of workload afforded by the mobile phone cannot be overlooked. The enthusiasm with which club secretaries described their use of broadcast SMS ("it's fantastic") makes this clear. Jobs of managing a

team or serving on a club committee have their own duties for the person to concentrate on, and relieving part of their administration burden saves time which may be given to club in more fruitful ways. This might also makes these jobs more attractive and might help in ensuring a wider group of people would be participate in administrative roles.

As a facilitator of communication, the mobile phone can certainly be seen as a mechanism to support cohesion within the sports groups examined in this thesis. Its use can also be seen to measure up well against each of the elements of social capital defined earlier: networks, resources for action, reciprocity transactions, bounded solidarity and enforceable trust (Pigg and Crank, 2004). The text messages and calls themselves comprise a network of links which define the extent of the community as a group. The use of broadcast SMS to encourage members in their participation and contribution to club affairs acts as a resource for action, which also may cause bounded solidarity within the group. Regular updates through social networks and apps keep supporters informed and in touch. This all effects to draw the thread of ties tight. Reciprocity transactions are most likely to occur among those who regularly keep in touch with each other. Enforceable trust is fed by the shared understanding of expected behaviour emanating for the group text messages – attendance and contribution to the community as a whole.

Smartphone use has enhanced these already fruitful bonding aspects of having regular communication links. Through social networks and apps they provide new ways for members to contribute and feel part of the community as a whole. They can also provide the opportunity to establish group identity through team building, as described by the member who spoke of how communicating through *WhatsApp* had bonded a team of different ages coming together.

The mobile phone has become not just an accepted, but rather an expected norm in club communication, making it almost a prerequisite for membership, as evidenced

by it being the main communication tool within the clubs. It has provided the clubs with new ways to coordinate and cooperate, and the GAA supporters, players and management have integrated the new modes of communication into club life in ways that have eased their participation in the community. In effect, the outcomes of mobile phone ownership have been cohesive rather than divisive for the community as whole.

7.3 Technology, community life and social capital

Personal technologies such as the mobile phone are seen to feed a trend toward increasing individualism in that they enable personal independence, with citizens existing as nodes in a networked society. Individualism is a term which has a rich moral baggage. It evokes both positive and negative responses in that, while it reflects the freedom of the individual and their right to autonomous action without the constraints of society, it also suggests a tendency towards egotism and selfishness. Of specific interest in this thesis is whether that autonomy results in a corresponding withdrawal from the types of cooperative endeavour which are seen to represent a strong society and enabling a high quality of life, as exemplified in the metric of social capital. This is the focus of my third research question.

The received view of the outcome of this 'networked-individual-based-society' is: if the individual is to thrive, existing community alliances will decline. Such thinking has been the basis of the 'eclipse of community' theories and the rise of communitarianism, but it does not reflect what is happening in the GAA clubs of my study. These communities are thriving, and the networked individuals who comprise them are using their mobile phones to keep the links between them strong and active. Club members exhibit the same trends as the rest of the population and being part of a local community group does not preclude them from the social changes identified in the literature, nor does it draw them away from the local associations they hold to be important.

Social capital, the supportive strength and synergy derived from the trust, reciprocity and exchange mechanisms of belonging to a group, is today the metric most often used to measure the strength of a community life. I now look at the outcomes of mobile phone use in a community group, expressed in how the phone might enable the fostering of social capital within that group. It is a difficult goal to quantify, but has been attempted for ICTs and particularly for the internet (for example Katz andRice, 2002; vanBavel et al., 2004; Wellman et al., 2003; Quan-Haase

and Wellman, 2004) . These studies have generally hypothesised three different possible effects:

- ICTs *diminish* social capital in that they draw people away from face-to-face interactions which are usually considered the richest form of human communication.
- ICTs *supplement* social capital by providing new ways to communicate and new places and times to do so (as provided by the personal and mobile nature of the device)
- ICTs *transform* social capital in that they draw people '... away from local and group-based solidarities and towards more spatially dispersed and sparsely-knit interest-based social networks' (Quan-Haase and Wellman, 2004). This can be seen to empower the individual or balkanise society.

Applying this type of analysis to my empirical evidence on mobile phone use I examine each in detail below, considering the five defined aspects of social capital: networks, resources for action, reciprocity transactions, bounded solidarity and enforceable trust.

7.3.1 The mobile phone diminishing social capital

In examining the possibility of *diminishing* of social capital, one needs to look at the relationship between the current (mobile-enabled) communication patterns and those in place before the members were users. If the mobile voice calls are simply replacing similar land line connections one might state there is no overall change; if they are replacing face-to-face links, which are inevitably a richer and more complex exchange, then a diminishing of personal relations is occurring. In the same way, replacing a voice call with an SMS is introducing a more distant, and less rich, line of communication. In each of these instances the more impersonal (and consequently poorer quality) communication link replaces conversations which might have gone beyond the simple information exchange evident from

economically-bound mobile calls or the limitations inherent in SMS, and helped to develop relationships.

There is no doubt that all of these replacement activities do occur within the clubs. Interviewees report that mobile calls are used in place of face-to-face meetings, and are often used in place of journeying to visit the recipient with a message[77]. Similarly, SMS messages are often used because they do not necessitate the 'small talk' that goes with a voice call which club secretaries described as making a tedious and repetitive chore of disseminating information through a landline. Convenient though this may be for the caller, it does also mean an absence of the small and useful exchanges which bond and link humans in ways which might bring them together.

Almost 30% of the interviewees explicitly state that they substitute mobile calls for face-to-face meetings or SMS for their voice calls. Considered alone, this is to the detriment of relation-building and consequent social capital development. However, the substitution here may not be a direct swapping of of one communication type with another, as each missed opportunity for face-to-face contact may be replaced by multiple mobile calls or SMS. Also opportunities to make mobile contact can arise when face-to-face meetings are impractical. This is evidenced by others (40%) who state that their mobile calls replace land line calls, but also add to them in that the ability to call irrespective of time or place that allows them to call 'on the spot' with news rather than waiting until meeting. These constitute extra, rather than replacement, calls. This change in practice due to technology enablement is similar to what happened when ATMs were introduced by the banks and people began to make multiple small withdrawals rather than taking out larger amounts on a bank visit. The timely opportunities for calls (or cash

[77]In his studies of email use, Nie describes it replacing face-to-face meetings as a 'type of time budget' (Nie, 2001).

in the case of the ATM) due to being in control of the technology means a freeing up of any constraints on the when and where of use and consequently increases the number of connections made. This causes a change in the character of relationships, not a diminishing, but rather an altered pattern of linking. People are freed to have timely, shorter, less intense (diluted) correspondence. For those respondents in their early twenties, the mobile revolution had come when they were in secondary school and the pre-mobile period[78] was a time in their lives when communication for them was from a home landline which with possibly restricted use[79], now they could call when and where they wished, making the mobile phone itself a 'resource for action'.

The mobile phone could also be stated to diminish social capital in that it feeds the role of the networked individual, and enables us to maintain a large number of personal links which may consequently reduce the importance of local social groups in fulfilling our social needs. Personal electronic devices such as personal stereo systems, laptop computers and mobile phones enable us to act as a 'set of atomized individuals' (du Gay et al., 1997), independently making our passage through life. However, those devices which are designed to communicate have an ambiguous role in this respect, as they allow us to freely roam while remaining tethered to our base. They also enable us to easily keep in touch with that base, in this case the local community. Although their mobile phones may now enable them to stay away, the club members do not make the choice to exit from their local commitments but instead actively participate in their club. This was particularly evident with a number of the interviewees who were students. They could have chosen to play

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[78] One person referred to their pre-mobile life as 'prehistoric times' (male, age 25-35, player).

[79] In fact, this was still continuing in the era of mobile calls. One person described how her father had banned fixed line calls to mobile phones (as he was responsible for the bill) and the family were forced to rely on their own mobiles and their own budget to call friends (female, age 18-25, player).

their game for the college and forsake their home club. However instead they chose to remain with their local club and keep their knowledge of its activities alive through frequent contact. Staying local and moving in many circles are not mutually exclusive states; members use the freedom to roam provided by their personal communications device to extend their sociability by maintaining a number of different worlds (of work, family and personal interest) while not letting go of their local community. Technology in this instance is not driving change but rather changing the terrain over which it is practiced[80]. The mobile phone might be said to enable a person to maintain multiple commitments which then allows them to be more mobile. This might not increase their social capital, but rather spread it over a number of areas.

One of the major studies which triggered off concerns about the impact of ICTs on socialisation is a paper *Internet paradox: a social technology that reduces social involvement* (Kraut et al., 1998). In their initial study the researchers proposed that having a large social network (similar to that which can be maintained by a mobile phone) and being more extrovert reduces the size of local social networks: in effect, having lots of small or distant ties can somewhat compensate for having big ties close at hand. In a later study, they found that the negative effects had dissipated. They explained this by maturation of internet use: 'they mingle their on-line and off-line worlds, using the internet to keep up with people from their off-line lives' (Kraut et al., 2002, p69). A similar state of affairs appears to be happening in these sports clubs in that members are managing to assimilate the large social networks afforded by the numbers held in their phonebook into a world where local association is still strong.

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[80] A similar outcome was noted by Laurier who examined travelling salesworkers who could communicate while on the move (Laurier, 1998). In this instance, technology enabled them to widen the territory they might cover.

The acknowledged limitation of mobile phone use for social capital formation is its role as a bridging tool. Although the bonding function might be experienced as an expected outcome of club group dynamics and one of the objectives of a sporting team, the bridging function is more tenuous. The regular mobile phone (using voice and text messages only) can be seen to contribute little to social capital bonding. However, the open public forums available through smartphones (for example *FaceBook* and *Twitter*) enable members to be aware, and even contribute to, the affairs of other clubs. This provides opportunities to extend a bridging social capital between rival clubs.

7.3.2 The mobile phone supplementing social capital

Although there is some indication of replacement communications activities and the consequent diminishing of social capital as described, there is also much evidence from interviews that both mobile calls and texts are additional communications, and do not reduce but add to the number of links made between correspondents, thus acting to bond the network and *supplement* social capital within the clubs.

What is evident from my empirical findings is the large number of very short messages relayed by mobile phone, using both voice and text. The immediacy provided by being in perpetual contact overcomes any limitations of cost or inhibitions in use[81], and all members mention how much they use text messages to directly convey information, to pass gossip, to 'slag' a friend, and to arrange to meet. In fact in the latter case, a number of interviewees remark on how before they owned a mobile phone they would 'make arrangements prior' but now they call in an ad hoc fashion to see where their friends might be or what their plans are, often

[81] The immediacy was clearly explained by one interviewee who stated that previously 'you would say, oh it's two o'clock in the day, he won't be at home, he'll be at work, I don't have his number..' now 'You are carrying your mobile around, and people say, he has his mobile, get in contact'.

more than once on a night out. In delaying the need to commit to arrangements in this way they have built flexibility into their lives, and they manage their choices appropriately. The calls or texts are short, but they are regular and high in number. The question is, does this improve the bonds between communicators? I would contend that it does. These short links in themselves are a form of contact which strengthens ties, and when these extra links end in a face-to-face meeting, it serves to tighten the circle of friends further.

Of particular import in the creation of bonding social capital is the use of group texts. Although the objective of these is often to enable members to save time and travel, they also make ties and reinforce feelings of inclusion. The group texts are instrumental communication, used for the delivery of information, a type of communication which is not generally considered to bond individuals together or create social capital (Pigg and Crank, 2004[82]. However, when used specifically to encourage participation, they are acting to maintain (and strengthen) the existing cohesion of the group as a whole. Members explicitly state that they are closer as a group because of these shared communal messages, and club management are aware of this and foster it to keep a club spirit active. This is evident in the comment of the manager who remarked that '… people feel left out if they aren't informed of something, … if quite a few people are informed, and you are the one who is not, you'd wonder why.' (male, age 25-35, club chairman). Each broadcast message is conveying not only the instrumental information such as when and where to meet but is also acting as a reminder to members that they are part of the club 'family'. Club administrators may have a very practical attitude to the functionality group texts provide, yet their ways of using it have an important impact on the overall bonding of members to their sports club.

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[82] Pigg and Crank distinguish between instrumental and expressive forms of communication, the latter being a richer form more valuable for bonding individuals together and associated with close ties. (Pigg and Crank, 2004)

The worth of group texts must be evaluated against the way information was previously distributed. Prior to mobile phone adoption, there was a pass-it-on style of messaging where a human 'daisy chain' was used to convey a message. This was enabled by an intimate knowledge of which members live close to each other, which work in the same place and which are related to each other. In passing a message (for instance re a change of venue for training) to those adjacent in the chain, members may have stayed to chat or exchange news, deepening the friendship between them. Although this might support a particular dyadic bond (and perhaps increased the social capital of an individual) it does not convey the inclusiveness with the group or increase bonding to the group as a whole.

It has already been pointed out in chapter six that the hierarchical distribution of group text has possible negative implications, lying in the role and authority of the person who instigates the message, and what style of messages they might write. With the political interactions which occur in all organisations, large and small, the sender of the broadcast SMS messages is in a position to manipulate events to their own benefit. My evidence from this study is that this is not currently happening and the group texts are helping to maintain a close and cohesive set of links within the clubs.

Interestingly, reflecting on current practice, the new modes of communication now available through smartphones and the MI are not replacing but rather supplementing existing links with club members. When administrators send out information (for instance match results), they publish it through multiple media – website, SMS, *FaceBook*, *WhatsApp*, *Twitter*. Although the message might not differ it may reach different audiences or enable a choice of place where it is received and even casual members can be updated through a simple message. Using a closed group for players on *FaceBook* or *WhatsApp* has been found to enhance team-building by providing a social form through which they can bond. These are

instances of more use of the technology, more links, more communication and closer relationships.

The handset's phonebook is also being used to supplement social capital in the clubs by providing members with an immediate way to establish contact. The interviewees all had the numbers of their club mates recorded in their mobile phone, and one of these would be the person they might conveniently call if they needed a favour or some work done, something particularly important in a farming community and amongst small business operators. This was particularly evident with the rural club, many of whose members were tradesmen. In fact when I mentioned to one that the club mate he had recommended I might interview had not been in touch, he said 'ah, and he might never know when you might need him for a job', implying that I too might be drawn into the cycle of reciprocity had his friend given me an interview. Such support and exchange meet the very definition of the term social capital '... broadly, social networks, the reciprocities that arise from them, and the value of these for achieving mutual goals '(Schuller et al., 2000).

From the empirical evidence gathered in this thesis, there is no doubt that the mobile phone, and text messages in particular, are being used in ways which strengthen the community group. The multiple short text messages which are exchanged among members keep them in close touch with each other and the group texts remind them of, and bind them to, club activities. Use of the mobile phone is enabling the sports clubs to do what they always did, but to do it with more ease, with more intensity and with dividends, and as such is supplementing their social capital.

7.3.3 The mobile phone transforming social capital

The third scenario, that where ICTs are found to *transform* social capital, refers to how members might fulfil their social needs through the networks enabled by their use of the technology rather than by face-to-face community. The inference is that

new opportunities to create social capital are formed through virtual communities, new forums where alliances based on common interests may enable social support to the individual (as described in 2.3.3). This has limited applicability to the traditional voice and text functions of a mobile phone but access to the MI through smartphones is providing members with the ability to engage with virtual communities and maintain several 'small circles' simultaneously. These 'small circles' may also be linked to their GAA lives and can go some way to contribute to bridging social capital with in eth organisation. The development of specific member groups in *FaceBook* or *WhatsApp* are in effect the creation of new networks which can, in turn, act as resources of action. Social capital is here being played out through virtual links to create the bounded solidarity of a strong and focused group.

To conclude, the relationship between mobile phone use and social capital formation is not straightforward. The phone is sometimes being used to substitute for other forms of communication, but it is also being used in places and at times where no other form could exist, and so provides an additional way to bring club members together. The new modes afforded by the mobile phone (anytime-anywhere communication and the provision of SMS messaging) offer more choice in managing relationships, and individuals use the technology to sustain their commitments and duties and to maintain an enlarged circle of friends. The extensive use of text messaging enables multiple thin ties and the feeling of constant presence to relationships. These individually may not provide the depth or richness of face-to-face interchanges, but their number and regularity certainly keep bonds active and alive. There is a 'soft' determinism at work here in that the technology is changing the parameters for human action by providing choice to users of how they maintain the relationships which are important to them. The club members use the phone as a way to bridge a number of different aspects of their lives – work, home, family and club – and seamlessly keep each of these circles intact. The effortless integration provided by the mobile phone is in this way enabling a networked individual to also act as a dedicated member of a local off-line community.

Chapter 8 Conclusions

This thesis has looked at the domestication of a new communications technology, the mobile phone, by members of a local community group. At the time of enquiry there was concern over perceived negative effects of such technologies on local interactions and in this study I examine the outcomes of adoption for the well-being of the group, as expressed through the social capital it engenders.

For a personal communications technology, like the mobile phone, there are two main aspects to domestication – first the acquisition and adoption of a new piece of technical equipment and learning about its affordances/utility for life practices, and second, learning how to use it as a mediator of personal relationships. These interrelated aspects are the basis for my first two research questions. A third question looks at the outcomes of use for community relations and the creation of social capital. I placed my study within two sports clubs in the West of Ireland. The clubs were both well established and already had a rich store of social capital, and they provided a focused way to access community life as well as being the site for appropriation.

My fieldwork took place at a specific time in the history of the mobile phone when the technology was still new enough to be a novelty, yet beginning to be more widely adopted and integrated enough for users to realise its potential and usefulness in their lives. By doing the research when I did, I believe that I have managed to capture a particular window before the technology shifted to being considered mundane and taken for granted in such a way that it was no longer seen as a technical device. Although the initial cycle of appropriation of mobile phones is

now largely completed, this does not mean that this study is only of historical relevance. Communications technology is still evolving and many users are now moving their mobile phone platform onto the newer 'smartphone' models which have enhanced functions and capabilities and provide new opportunities to link in with internet technologies. My brief enquiries into the changes wrought by smartphone introduction can shed some light on how deeply established the mobile phone has become in community life and the trends of use which are evolving with the merger of mobile phone and internet technologies.

There are five main findings from my work, each of which is examined in a subsequent section of this chapter. In brief, these are:

Majority-adopters of technology have differing attitudes and needs than early adopters.

My conclusions relating to phone adoption are very much influenced by the fact that the phone users I interviewed and surveyed were what diffusionist theorists (such as Rogers, 1995) might term 'majority adopters' in that they were adopting at the later stages of diffusion. This is in contrast to the bulk of mobile phone studies which examine use at an earlier stage of adoption, when the technology was seen by many as expensive, exotic and technical. They were in general ambivalent about their technology: they were very taken with the affordances it gave them, but were in no way excited by any aspect of it beyond its simple communication function. To them it was simply a functional everyday object. This is contrary to many of the findings based on early adopters and should be acknowledged by vendors and providers to give the end user the service they prefer.

The technology adoption process is eased and accelerated when done within a close social network.

I found that the adoption process for community members was influenced by the fact that they could call on the social capital of the group to demonstrate and support their taking on of the mobile phone. Group membership offered many opportunities for new users to see the technology in action and to trial it for themselves. In particular, the common act of 'handing on' a phone to a friend within the group for them to trial gave many potential users the opportunity to see the benefits of ownership at first hand. This act is one not often documented in the

literature, but was a very useful method for potential adopters to pilot use before making a commitment to purchase. The social network of the community group also provided a platform for phone use in that administrators in both clubs were using broadcast SMS to disseminate information. The synergy of the group in this instance provided a thrust towards adoption and reflects the strength of social influences on technology adoption in general.

There are demographic differences between males and females in the early adoption process of technology and rural dwellers have more demanding needs than their urban counterparts.

This thesis seeks to contribute to the body of work exploring how the social fabric patterns the way in which technologies are adopted and used (Stewart 2007). I therefore also chose to look at the demographic contour of adoption through the factors of gender and rural/urban life. Traditionally, women are deemed to be more hesitant about engaging with technology than men, and although the phone is now used by everyone within the population, I did find differences in how and when the women and men in my study came on board with the phone. Those who live outside urban areas are often considered to be less interested in technology and may be ignored by producers who wish to tap into a mass market. However, my findings are of rural dwellers who are closely engaged and avid users of their mobile phones but who are poorly supported by companies who are engaged to provide 'universal service' within the country.

Users are innovative and skilled in incorporating technology into their lives.

Due to the practice of collecting mobile phone numbers from a large number of new acquaintances, the club members have found that their circle of friends has become wider, bringing more people within easy reach. This has raised the need for personal management skills to handle their new communication patterns and extended networks. It also has implications for the differentiation of the different circles in which they move, and repercussions on their work-life balance. The club members have risen to these new challenges with aplomb. They categorise their social network as having an 'inner' and an 'outer' circle and they work to keep the outer group active even though they might rarely meet. They have also developed techniques to make and respond to calls from the different worlds which they inhabit, irrespective of their physical location. It has taken time to develop this balance, but they have risen to the challenge with ingenuity.

Clubs have also incorporated the smartphone and the new opportunities it offers through MI and app use into club affairs. They are using social networking in a way which integrates even casual members into club affairs, in effect broadening the circle of membership in a way which strengthens club support .

The mobile phone is being used to enhance and strengthen social capital within community groups.

Community group members have indicated that use of the phone has brought their immediate circle closer by enabling access to their friends and family with a single keypress. This may mean that they do not meet so often face-to-face, but they are instead exchanging a large number of regular text messages with other club members. The regularity of this contact has offset any ways in which phone use may have replaced personal meetings, and has had the effect of tightening the bonds within the groups. The use of broadcast text messages by group administrators also works to bond the group together in that it reminds each member that they are part of the collective and keeps them in touch with local activities.

8.1 Viewing technology adoption through everyday use

The subjects of my study were ordinary users, not the early adopters examined in many STS studies, and I believe that by examining their adoption it is possible to gain a more grounded view of the process. There is a tendency in STS to look at the adoption and attitudes of users in the early days of a new innovation and this can lead to claims based on the outlook of those who are technically-minded and specifically interested in the device. The 'majority adopters' (Rogers, 1995) of my study took to the technology during the years 1999-2000 when the mass of the population acquired their phones, and as such were everyday users who chose to adopt when the mobile phone was on its way to becoming a mundane technology.

These majority-adopters were somewhat confused about the role of the mobile phone at that time – it couldn't be termed a *new* technology as it was well established within the population, but it wasn't *old* either, and their responses to it were often conflicting, moving from fascination to indifference. Perhaps they didn't want to think of themselves as being intrigued by something which had so recently been considered a technical toy and so degraded the importance of the object itself, but equally they couldn't resist becoming a user themselves.

Their choices during appropriation (and re-appropriation) were often found to be contrary to those which the manufacturers promote. Although most could afford to buy a sophisticated phone model, they were interested not in conspicuous consumption but rather in owning a cheap and practical tool for everyday life. Here they are rejecting the scripts , programmes and value of vendors and first generation users, and instead are adopting the phone to the practices and norms of their own life and culture. This finding fits more closely with the idea that: '... the mobile phone *qua* decorative endeavour is not a universal impulse; many users just accept the mobile phone as an 'off the shelf item'. ' (Katz and Sugiyama, 2005, p79).

Early adopters are perhaps by definition attracted to technology when it is new. In contrast, my cohort wished to view the phone as a commonplace artefact and they expressed little interest in anything which got in the way of its functionality. They had seen the mobile phone in use for some time and may once have viewed it as an expensive technical object, but time and familiarity had changed their perspective and brought it into the realm of a desirable consumer commodity which they felt

had valence in their own lives. Choosing this demographic for my study (at this particular time) captured those who found themselves on the cusp of the phone reaching a state of 'Taken for Grantedness' (Ling, 2012) and their ambivalence around its import and role in their lives is an interesting and often ignored aspect of STS.

In their (initial and subsequent) purchase choices the club members were found to disregard the fashion trends in phone models as promoted by producers. Many 'fashionable' phone features were devised in response to the desires of early teenage adopters and for this group such decorations held little interest. It is possible that since the set of users interviewed here were of an older age group (aged 18-55) than those regularly sampled, they might be less preoccupied with external appearance than a younger cohort. What was of concern to them were requirements such as good signal strength and an easy-to- use operating system.

The lack of interest by the interviewees in mobile phone fashion is also reflected in the fact that they (unlike perhaps fashion-conscious teenagers) appeared to attach little emotion in their attitudes to the handset. They valued it as a portal to the world outside themselves, but considered this to be manifest in the numbers in their phone book, which could be recreated if necessary. They believed that the worth of the phone is not embodied in the physical artefact, but rather in the technological ability for mobile communication. This matches Vincent's findings described earlier in that they, like the subjects in her study, see '… social groups or buddy groups as the focus for … emotional attachment.' (Vincent, 2005, p122). It is a very pragmatic view of the device.

Most of the majority-adopters in my study were simply seeking a functional, durable and convenient device with which to make calls and send text messages. They were not particularly enthusiastic about their mobile phone as a piece of hardware, and in interview talked about it simply as a serviceable tool, and certainly not as a fashion object or technical gadget. In fact 'handy' is the term they most used to describe the role of the phone in their lives. This is quite contrary to what might have been the experience of early adopters who may have felt the need to justify their purchase with enthusiasm over its technical capabilities. These 'everyday' users did not find the communications ability of the mobile phone

remarkable but did appreciate the affordances it offered to call their contacts at any time and from any place. It was the data held in software which mattered to them: the names and numbers of their contacts. They may have been loath to consider it a technical object but they were certainly competent in technical aspects of its use. Everyone understood characteristics which had not been present in fixed line phones (such as SIMs, roaming, service agreements and 3G technology), and all were able to immediately access the 'last 10 calls data' when requested. This proves they had all 'played' with their phone, evidence of a certain fascination with it.

There are numerous ways in which these majority-adopters displayed ambivalence in their practices around phone use. They had no desire to decorate their handset or tailor it in any way, but practically everyone I spoke to left their phone on display, usually on the table in front of them, or brought it out from their pockets when talking about its use. They all spoke of its demand on their purses, but were still willing to spend more than their European counterparts for monthly use. There was a dismissal of its importance ('it's only a phone!') and yet they claimed they would be 'lost' without it. It is almost as if they were keen to show they were in control and were in a big hurry to relegate it to the mundane and make it an 'invisible' part of their lives.

These findings follow the interpretation of product diffusion by Donald Norman (1998). He considers that there are two phases in technology adoption and diffusion, marked by a product transitioning from being technology-driven to consumer-driven (and in moving from early to late adoption). This he summarises in the diagram shown in Figure 4 (a modified version is produced again below in Figure 22). Majority and late adopters enter a consumer-driven marketplace, one where the technology is 'good enough' and therefore irrelevant. Norman believes that this requires a different response from industry – they need to change from providing increased complexity to providing convenience, improved user experience, low cost and high reliability. I found that these were exactly the types of features to which my respondents aspired and my evidence supports his writings.

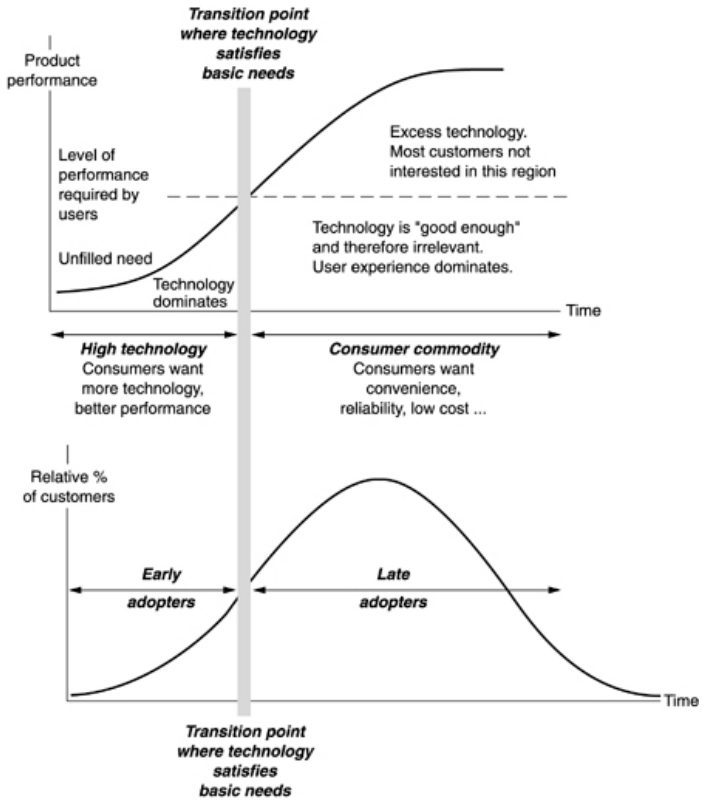

Figure 22. Technology diffusion curve (Norman, 1998)

Considering the performance of end users from studies of early adopters alone limits our knowledge of the actions of many of those who take it as part of humdrum life and do not imbue its use with significance. Early adopters are not good representatives of everyday users – they are leaders who have a particular interest in seeing the success and spread of the technology in which they have invested, and they are often interested in sophisticated and complex features. As Norman notes, a mass market product has different requirements and the energy and money expended in creating the 'excess technology' shown in his model might be better put to use to creating a sustainable and artefact appreciated by all.

In order to get a comprehensive understanding of adoption and domestication there is merit in looking at the evaluation process of users throughout the social fabric who engage at different stages in the history of an artefact. For these reasons, my insights give a distinct perspective on mobile phone adoption and add to STS work on the later stages of adoption when a technology is on the verge of becoming mundane.

8.2 Support and creativity through social capital

I found throughout this study that the social aspects of adoption were of great import, and that having a strong social network promoted and supported the buying, learning about and subsequent use of the technology for club members. When one is part of a community group where the exchange mechanisms of social capital are at play there is a readily available set of people who can support the first steps in becoming a user. In my study, sports club members spoke to their friends about purchases, helped each other with the initiation process, and collectively evolved acceptable practices of use. For those dubious or cautious about the technology, being a member of the community group influenced the move towards acquisition.

When a technology is making its imprint on society in the way that the mobile phone was during the years of peak purchase, it becomes a topic of discussion throughout the population. This was of course happening in the clubs, and there was much 'small talk' about mobile phones, who had one, what they used it for, and anecdotes around its usefulness. Being part of a community group means that as each person comes on board as a user, a fresh discussion ensues and as the number grows, so also does the pressure on others to join. Seeing examples of the technology in action, hearing others speak of its benefits or just wanting to be in line with others are all parts of Rogers's (1995) 'observability' aspect of diffusion, and all acted to encourage adoption.

Potential phone adopters who had not yet taken the step to ownership but were perhaps engaging in the *imagination* phase (Silverstone and Haddon, 1996) of the domestication cycle could also, through their friends, family or club contacts, sometimes avail of the ultimate test as to whether they might become users by trialling the phone before use. This could be by having the loan of someone's phone to make a call or text, or even better, receiving a second-hand phone when the original owner wished to move to a new model[83]. Their only investment was then

[83] The phone companies at the time often offered 'free' upgrades, in return for the subscriber committing to a year-long contract. Most Irish users (over 75%) were on a pre-pay scheme and the upgrade contract (post-pay) ensured they did not switch supplier in the near future. It also, in the case of the handing-down process, often gained a new customer.

for a SIM card and this appeared much less of a commitment than engaging in the complexities and decisions around a formal purchase transaction. There was substantive evidence of this 'informal economy' (Stewart, 2007) taking place in the clubs[84]. A handed-down phone also came with a convenient help mechanism – the original owner was close on hand with intimate knowledge of the phone in question.

The idea of acquisition of a piece of technology to trial through handing-down is one that suits both donor and recipient. If an item is functional but slightly outdated, passing it on is a form of recycling, of sharing technology benefits through a longitudinal 'trickle down' process which perhaps offsets some of the sense of guilt the owner may have in their indulgence of a new purchase. Handing down overcomes the cost-utility threshold for the first adoption. The consequence in most cases is that the recipient will become used to having the product and will in time replace the second-hand model with a new purchase (and perhaps even hand down the original again). This informal interchange was crucial in the widespread expansion from lead users to secondary and eventually to general adoption within the clubs, and the phone moving from being considered a technical gadget to being a piece of everyday equipment.

Being a member of a community group also eases the learning process for those who have chosen to adopt. Many everyday users find the early stages of taking on a new piece of technology a confusing period. The documentation provided is often limited, missing or only available online, and it can be difficult to follow the schematics and brief explanations provided in the multi-lingual manuals. This is where more experienced friends and family can step in as support and the new user can find their adoption process greatly eased by having a strong social network which will tutor and help them. In my study clubmates acted as 'local experts'

[84] Another method of acquiring a phone without making a direct purchase was through gifting, and this was in much evidence during the Christmas period 1999. This is another example of adoption through the social fabric of one's network. Phones were also given as birthday gifts to teenagers and in this case were a form of 'rite of passage' in that the gifter (usually parents) were conferring on the receiver the ability to make their own choices over their personal communications but also requiring them to budget their use – giving freedom but with responsibility.

(Stewart, 2007; Bakardjievea, 2005) providing advice and encouraging others. They helped new users to become familiar with the functions of their handset by demonstrating features and teaching them how to enact these.

New users often discover problems which inhibit their basic appropriation and everyday use of technology and which they need to manage or control (Stewart, 2003). Within the sports clubs initial problems included the complexity of purchase choices, fragile handsets, poor signal strength, and confusing operating systems[85]. Added to this were the burdens of ongoing costs and the problems of everyday use such as handling withheld numbers and frustrations over public use. In the rural club in particular, signal strength was a common problem for users who lived in (or whose regular contacts lived in) more remote areas. Since these are local community organisations the problem of signal strength is shared for all who live in the vicinity. There was considerable exchange of information within the groups on the location of phone masts and the strength of reception in various locations, enabling the best choice of carrier for members. In this way being part of a strong, regularly communicating collective is feeding efficient and productive use of the artefact. Other examples of cooperation included several friends changing to the same carrier so that they might avail of preferential rates within that network, and exchanging ideas on how to deal with PRIVATE NUMBER incoming calls.

One major finding within the clubs was how broadcast SMS had become incorporated as part of the regular work patterns of club administrators and was now an expected part of everyday interaction. The distribution of timely information through the phone has created a culture of ownership tied to membership and also brought the unexpected benefit of bonding the group together through being part of the circle who receive messages. This is evidence of users adapting technology in creative ways to suit their own needs and an example of Haddon's 'innovative users' (Haddon, 2005).

[85] Interestingly, most of these problems appear to be unrecognised by the manufacturers and designers of the artefact, and yet are caused by them and are within their power to overcome.

All of these users found club membership had a strong influence on their adoption process and eased their passage to becoming a competent user. Problems were openly discussed and ideas exchanged, and when confused they could always ask 'one of the gang'. This is clear evidence of the import of the social fabric in the adoption process.

8.3 The demographic contours of adoption and use

My study explored the demographic contours of adoption and use and how they were shaped by the social fabric through the prism of two readily observable factors: gender difference and rural/urban differences. I considered both of these factors through my research question on mobile adoption and my question on the use of the phone to manage personal communications, and did uncover some elements of differences in each case. My findings suggest that the speed of adoption and extent of use of new technologies is not gender neutral. In the sports clubs, it is males who are the first to become users, and they spend more on their calls than females. I also found that rural users were more dependent on the phone for relationship management and day-to-day interactions than urban dwellers, and they did not always receive the quality of service they required.

In terms of the traditional gendering of technology, the mobile phone occupies a somewhat androgynous position: it is a piece of electronic equipment (masculine) used to keep social relations active (feminine). However, it appears that during the early days of its commodification the mobile phone was seen as a technological gadget and it was the male club members who first bought it for themselves. Women either received the phone as a gift or as a hand-down and only one respondent purchased it herself, on the basis that it would increase her safety. This pattern of gendered acquisition of the phone matches closely with Sørensen's findings: 'While the male informants either got the mobile through their employer or bought one themselves, all the women received their first mobile as a present.'(Sørensen, 2006, p52). It appears that despite attempts to de-genderise the workplace and encourage girls to study science and technology in recent years, the traditional pattern of males being more interested in new technology than females (as found by researchers such as Kirkup and Smith Keller (1992), Spender (1995) and Wajcman (2004)) still persists. Of course women do use the phone now that it is a mass-market product, but as Green (2002) has noted: 'traditionally ... the democratisation and feminisation of leading-edge technologies goes hand-in-hand with the technology becoming less leading-edge than it was'(p172).

With over 100% penetration of mobile phones in Irish society, one might assume that there is no gender difference in current ownership, but it appears that electronic devices are still seen as masculine technologies and in this instance the technical overrides any functional assignation. This is an interesting contrast to what

Cockburn and Ormond (1993) found in their study of the early life of the microwave oven which designers considered a technical artefact and so marketed to a male audience. For the microwave, it was function which triumphed in that the ovens were in fact adopted mainly by women, causing the device to gender-hop from technical artefact to kitchen implement.

The early literature on the fixed line telephone reports that women used the telephone for social reasons (kin-keeping) while men used it for instrumental calls (Maddox, 1977). The mobile phone is very much an object for social communication and there no longer appears to be any differentiation between the genders regarding the types of call made. In order to make definitive claims on call content for my cohort of users I would have required a different (and more invasive) methodology which was not part of my objectives. However, with the evidence I do have, it appears that both genders are enacting general social use with the phone, with both predominately using their phones to keep in contact with friends and family. This change would suggest that males have heeded the advice of the phone companies who encouraged them to make social calls as described in section 2.1.5. Although I didn't specifically look at call content, one small difference in use is interesting to note. In the 'last 10 calls' data not one of the women I spoke to had either sent or received a call regarding work, whereas several of the men had.

Due to the myriad tariffs and offers by the phone providers it is difficult to build a comprehensive picture of how much any individual is using their phone. However, one metric which might be used is that of the monthly amount spent, and in this the male phone owners of my study had higher average values, even when those who depended on it for work were excluded. Drawing significance from this is complicated by the fact that the males reported that they rarely tried to curb their spending while the female users were much more aware of cost and all the women had personal techniques in place to limit their outgoings. A more detailed tracking of cost is required to draw definitive conclusions, which is again outside the scope of this thesis.

I also chose to look at any differences in use by those living in urban and rural areas. Although in many ways lifestyles in the country and the city are becoming similar, the two locations do invoke different communication needs. Rural dwellers may

experience a lack of cultural and social opportunities locally. In the rural area under study, buying a loaf of bread necessitates a 10 kilometre drive, and travelling to a swimming pool, cinema, hospital or large shopping centre is an hour's journey. Being able to easily link into activities and people through EMCs can limit feelings of isolation and exclusion and the mobile phone can be used to reduce the need for unnecessary journeys. This can cause a 'push' factor for mobile phone use. This was evident in the many small ways members of the rural GAA club described using their mobile phone: texting just to keep in touch; calling to discuss a recent game; sending an SMS to remind a partner to pick up milk; calling a clubmate to arrange a lift to the match. In particular, there was much focus on sorting out of travel arrangements – being collected or dropped at a certain time or place, or sharing transport ('I call to see who is taking the car'). These issues are more pertinent when distances are further and public transport or taxi services less accessible. There is little other comparable research in this area with which to align these findings.

It does appear that rural clubs are slower to move through the observed 'cycle of technology' leading from simple information provision through to interactive social network use through the smartphone. This may be due to the fact that 3G and 4G coverage is more scanty in rural areas or is perhaps because rural members are less inclined to adopt and use the MI. In any case, it appears they will catch up in a short time as the interaction between clubs is extensive.

It is difficult to make precise comparisons in the absolute levels of use by the rural and urban dwellers of my research. When high spenders[86] (those with more than twice the average value) are removed, there appears little difference in monthly spend. One thing which did come through in interview though is that rural users, despite their stated needs for the phone, receive a much poorer service from their providers. This was reflected in the fact that they needed to be aware of the location of phone masts and quality of signal in their locality in order to determine the range of their service. It is doubtful that urban users would have any knowledge of the more detailed technical aspects of provision, and this is something which most

[86] There were high spenders in both urban and rural groups. These were mainly self-employed workers who were dependent on the phone for new jobs.

providers might assume was invisible to users. The government policies for universal service are falling short in this domain.

8.4 The user as manager of merging worlds and merging technologies

All of the club members stated that their circle of friends had become wider through being able to record numbers in their mobile phone. The net effect of this is a need to manage an extended set of relationships and to cope with contacts from different parts of their life all coming through the same device, at any time and in any place. Management skills are particularly necessary for incoming calls, which may be from anyone they know and can arrive at an inappropriate junction in their day where the context or nature of the call is difficult to handle. The club members have become adept at organising their expanded networks and coping with the merging of different groups of friends, acquaintances and work colleagues all through the one device.

Once there is over 100% mobile phone penetration in the country, practically everyone carries a set of contact numbers of all their associates with them at all times in the phonebook directory of their phone. This provides a means to contact family, close friends and passing acquaintances all with a simple keypress. Not all numbers will be used with the same regularity, however, and the club members could (verbally) distinguish their friends as being part of an inner or an outer circle, the former being family and close friends, the outer being acquaintances. Those in the inner circle are numbers which are important within the meaning of 'perpetual contact' and are likely to be used regularly for short frequent calls and texts to keep in touch and provide support in day-to-day living. Those in the outer circle have been gathered in a rather informal way, as exchange of numbers has become for club members a closing statement in an encounter, a way of stating 'glad to have met you'. They may also be older friends who now live elsewhere or move in different circles. This outer group may be contacted in situations such as needing a favour or issuing an invitation, and possibly also being subject to a regular 'mopping up' exercise where they are sent a brief text to keep the tie alive. Being easily contactable through the phonebook means they are within reach and subject to attention in the 'folds of life', when a few short moments might be filled by useful relationship maintenance. In this, as in other aspects of mobile phone use, the end user is clever at manipulating the technology to meet their own needs and can gather and categorise co-respondents easily.

This finding corresponds with those of Kraut et al. in their study of internet use. As described in section 7.3.1, these authors first studied the socialisation of internet

users in 1998 and reported that their subjects were ignoring their 'local' friends and focusing on relationships within their virtual networks (Kraut et al., 1998). This gave rise to some of the early dystopian claims around how use of EMCs was negatively impacting on our social lives. However, in a follow-up paper just 4 years later (Kraut et al., 2002), the authors revised their opinion and acknowledged the management skills of users to 'mingle their on-line and off-line worlds' and keep a wide circle in place. Presumably a certain maturing of the technology and a period of learning by end users had caused them to modify earlier practices and integrate its use appropriately in their lives. Unfortunately it is Kraut's initial work which is often used as a basis for claims that we have a limited capacity to maintain relationships and that technology is distracting us from associating with those amongst whom we live. It is also fine fodder for those claiming the demise of local communities.

Being an active mobile phone user means making and receiving calls in any place and at any time and this can require juggling different types of calls in multiple different settings. This is management of the second articulation of the phone. An intermingling of work and social lives means that the receiver of a call may need to handle instrumental (factual) and expressive (emotional) calls in any physical setting. Club members recounted many such incidents. When fixed line phones were the only form of telecommunication, calls normally came when one was in a suitable setting to take them and there may also have been the possibility of having a 'filtering' system in the form of a friend or family member who would make excuses or take messages. With a mobile phone we are obliged to answer (or have a good reason why we didn't) and need to be able to 'think on our feet' and have a ready response for the caller. To manage communications in this environment, flexibility is needed and the ability to switch contexts is becoming an expected aptitude for a mobile user. This may mean carving out a physical space in a public place where one can gain privacy to talk, or extracting ourselves from existing company. Alternatively, it may be a case of stating 'I can't talk now, I'll call you back' which is usually taken with little offence as the caller can identify with the situation in question. This handling of multiple conversations concurrently has been found in much other research (for example, Ling, 2002; Fortunati, 2005; Love and Kewley, 2005; Cumiskey, 2005; Relieu, 2009; Weilenmann, 2003). Links have in many cases been made with the work of Erving Goffman, and his views on 'front stage-back stage' performance (Goffman, 1959) can be aptly applied to such interactions. The complexities of relationship management for a phone owner are a form of dancing between distant and local, evidenced in terms of space and place,

and the seriousness or lightness of our interlocutor at the other end. With practice, club members are learning to balance these once separate areas of their lives.

Being permanently contactable also means that the different worlds one might inhabit no longer have rigid boundaries. Social and work calls can both come through the same device, and sets of friends who come from separate parts of our social lives can all contact us on our mobile phones. This requires another set of management skills – the ability to merge different contexts while keeping the boundaries for a private life. Research has found that 'the mobile phone is not primarily a work extension device' (Wajcman et al., 2008). My findings support this in that the balancing of social and work lives did not appear to be a cause for concern by club members as they had drawn their own limits as to when and where they might reply to work-related calls. For some who were self-employed (mainly in the building trade) the phone was their primary source of work and they welcomed the fact that they could be on the road while still being available to receive calls outside regular working hours. In this, as in other aspects of phone use, they are making choices which suit their own lifestyles and my evidence is of club members who keep a balance and manage their own boundaries while still remaining in constant touch.

Another area the club members have managed well is changes in the mobile phone itself. The development of the smartphone brings with it not only colourful screens and the ability to send photographs in a message, but also the opportunity to use the internet and small applications (apps) designed to carry out useful daily activities. These have been seamlessly integrated into everyday club use and the new software elements available through a smartphone are adding to, rather than replacing, existing services. In manager-team relations, text messaging still predominates communication lines, and broadcast SMS is still the main way to convey important messages to team members. However messages are also duplicated and sent out through other media routes – for instance closed *FaceBook* or *WhatsApp* groups. In effect, the message is available in whichever communications network the receiver might favour and many players will read the message multiple times through different sources. Eventually perhaps some other form of technology might dominate, however at present the convenience of broadcast SMS and its advantages of targeted delivery and a guarantee that everyone can read it makes it still the dominant technology in manager-to-team communication.

While managers may still use group text, other administrators are using the MI in ways which are broadening the audience who can contribute to club affairs. Postings of photographs and comments through social networks enhance social inclusivity in the club by enabling supporters to have their say. Websites are being used for PR to present the 'public face' of the club, but social networks are keeping club interaction alive in a way it never could before. This is somewhat akin to what the 'Web 2.0' concept brought to the internet – a moving from broadcast simplex dissemination of information into forums for public discourse and comment. Now any member can contribute publicly and fell they belong. The clubs are embracing these new opportunities and members are using them with enthusiasm.

8.5 Widening the circle and closing the group

A key finding in my study was that although community group members all now had a wider circle of friends to manage through their mobile phone, they were also using it in ways that brought the 'local' friends of their inner circle closer. This was mainly through the use of multiple short links to maintain a constant presence, and when supplemented by the use of broadcast SMS by club administrators, these links acted to further bond the community group together and promote the creation of social capital.

It is recognised that mobile phones have enabled independence by assisting people to link to anyone they know at any time and in any place within a 'networked society'. The members of the clubs I interviewed and surveyed were all 'networked individuals' of this type, and they chose to use this emancipation to widen their reach and also to strengthen links within their old, close, local friendships. Being free to extend their social network did not prevent them from contributing as administrators, players and supporters of their local community group, as might be suggested in the literature. In fact, it had the opposite effect, corresponding instead to Woolgar's (1999) suggestion that : '… some technologies intended to create new virtual systems of social organisation actually reinforce non-virtual practices.' (Woolgar, 1999, p6). My evidence is that the mobile phone enabled an extension of individual social networks and also enhanced the social capital of the group as a whole.

As described in section 7. 3 the influence of the mobile phone on social capital formation is complex. The phone can be said to *diminish* social capital as it is often used to replace face-to-face meetings where social capital may be fed and nurtured. On the other hand, the replacement activity is usually multiple short text messages, each a less rich form of communication, but due to their frequency, carrying much potency in forming bonds. I would argue that it is the pattern of making links which is changed, but not the depth of relationships formed and maintained. Frequent communication, even though it may be short, is a constant reminder of a communicating partner, and many short calls or texts are just as effective as occasional long meetings in binding relationships.

The mobile phone can also be seen to *supplement* social capital in that it facilitates impromptu calls and texts when an event, comment or need causes one person to think of the other. This could be to pass on a piece of work, inform them of an opportunity, or ask for a favour – typical exchanges of the 'credit slips' of social capital (Coleman, 1990). It is timeliness which drives such calls or texts - if senders were without their phone the contact might never be made. Contacting each other in this way acknowledges flexibility in one's own schedule and respects the same for others. It also enables the communicators to inhabit other spaces concurrently, maintain a number of different interests and keep the different parts of their world active. It is a widening of the spatial area and range of interests available to users while still letting them be part of the local.

Of course the one major supplementary activity within both clubs is group texting. While some of the broadcast SMS messages sent by administrators are replacing other ways of informing players of fixtures, many others are confirming arrangements or a change of schedule. The SMS also have the by-product of reminding members of their role as participants in the club social network, and so constitute an agent of inclusion. In some instances a group text is sent with the specific objective of bonding the club, for instance when members are asked to come and support the juvenile team when they have an important match. Through these activities the phone is being used to tighten the threads of the inner circle, keeping everyone close to hand and strengthening social capital.

The persistence of community life is also dependent on members being available to carry out the administrative duties necessary to keep the collective functioning smoothly. Use of the mobile phone has supported this by providing a work tool to ease communication. This has reduced the burden of taking on one of the many voluntary roles within the club and means there is a larger pool of willing workers to take on the task of group management.

These findings of new and increased opportunities to develop and grow social capital are a direct counter to the theories posed by communitarians which suggest that an eclipse of community is occurring. Eclipse theories propose an *eclipse of locality*, an *eclipse of the more limited social circles* in which we live and an *eclipse of commonality*, enabling a wider circle of interests and friendships (Stein, 1960). The

idea that provision of ability to roam might cause a loss of local attachment (and eclipse of locality) is not happening – there is still a strong affinity in people's minds with local place. There is a certain eclipse of the limited social circles in which people live, in that they are now able to maintain relationships from a wider physical area and many different work and social domains. However, evidence shows that they are able to manage these alongside friendships in the communities within which they live or grew up. As already mentioned, management techniques developed by users enable a wider circle of interests and friendships without the 'eclipse of commonality', keeping older ties alive.

The concept of an 'eclipse' of community suggests a reduction in its strength and persistence. However, new communications opportunities within the community group open up possibilities for them to be flexible in operation with the affordance of communication across barriers of time and space. There may be some opportunity costs associated with this in that people expand their communications across a wider range of domains and dilute individual linkages, but their loyalty to the local associations which interest them remains, and it appears that we are not going to experience a loss of the valued community alliances which communitarians believe feed a healthy society.

8.6 Strengths and weaknesses of methodological choices

After reviewing the knowledge claims of this thesis it is now time to reflect upon the research journey and the choices made. The research design choices and conceptual framework I chose in carrying out this study were key in shaping the knowledge I was able to generate. One particularly crucial factor was the time period during which I carried out my fieldwork (2006). It was a time when the mobile phone was relatively new for these groups and a time when these users could appreciate and communicate the changes it allowed in their lives, and yet was before the technology had 'disappeared' into mundane acceptance. The work has valuable lessons for the future as new technologies are constantly coming on stream and hopefully these might be applicable for the development and adoption of future devices.

Guided by my research questions, I was required to take both a close-up view (individual experiences) and a plan view (changing communication patterns within the clubs) of the adoption process. This required shifting perspectives at certain points, and I chose to do this through the use of mixed methods, quantitative and qualitative. I think that the different methods blended appropriately and complemented each other although there are some alterations I would make were I to repeat this study.

I chose to take two case studies to study in order to preclude selecting one which might prove atypical. This gave me the opportunity to regulate my sample and to compare the influences of gender and rural/urban living. I used the domestication approach to guide how I carried out my research and analyse my findings. This was, in effect, a trial of the approach being applied to personal technologies outside the location of the household, and I believe it stood up well to this test.

8.6.1 Benefits of methodology choices

I was pleased with the choice of GAA clubs as representative of community groups since they covered all demographics of the population, although I did have to specifically include a women's club to ensure this. Choosing a population of respondents who were not defined by their adoption or not of technology (as studies of technology adopters and of virtual communities are) and whose raison d'être, playing sports, was in no way influenced by its use, made the phone an

independent variable and avoided biasing the selection of respondents in ways that focused upon exceptional (e.g. early) adopters and excluded non-users. Club members meet regularly F2F to play games and as such had strong social capital already existing prior to mobile phone adoption. If use of the phone by club members was going to have any beneficial or detrimental effect on their relationships, they would be sure to notice.

Doing the study in 2006 enabled me to study a cohort who were very familiar with the phone, although it was relatively new for them and had only entered the public consciousness as a consumer artefact a few years previously. The users I interviewed were, for the most part, 'majority adopters' and this provided a different insight than the bulk of studies which concentrate on the earlier stages of the adoption cycle. Since the mobile phone was still a novel technology, the 'rules' around its use were still evolving and everyone was still rather aware of its presence. These factors all provided a topic about which the respondents had plenty to say, and they were willing to relate anecdotes and had opinions about its use and the changes it had facilitated.

Being able to revisit the groups several years later enabled me to examine how firmly entrenched the technology had become in the clubs and to see how development with smartphones had been incorporated into the everyday.

8.6.2 Disadvantages of methodological choices

My survey was small in scale which enabled me to look at the process and outcomes of adoption in close detail. However, it was limited in scale and geographical scope, and carrying out a larger survey might have provided a better understanding of the parameters around uptake and enabled me to offer more generalised knowledge on the structural effects of mobile phone use. However, I believe that simply increasing the sample size would not necessarily have produced a deeper understanding of club interactions.

I was generally happy with the outcome of interviews, although a few changes to my questions may have helped to draw clearer conclusions. At the start of my research I was expecting to see substantial difference between rural and urban use.

However, these didn't really materialise– or at least were not readily discernible through open discussion. It is possible that I could have gained more insight if I had structured the research instruments towards these issues and directed questions specifically on the advantages / disadvantages of the relative locations, or set scenarios and asked about use linked specifically to travel and access to essential services such as shopping, medical appointments or attending cultural events. Alternatively larger scale methods might have revealed differences that were not evident with my relatively small sample.

The evidence on gender differences on initial phone adoption emerged only when I began my analysis. I think were I to repeat my interviews I would ask for more detail on the content of calls to ascertain if females are fitting calling patterns similar to those found for fixed line phones by making more regular obligatory calls for kin-keeping. It is a difficult balance to ascertain call content without being overly intrusive, but a carefully posed question ('Do you regularly call any family members just to check up on them?') may have enabled me to probe further. I could also have asked about amount of use in more detail. It is not easy to make definitive claims on mobile phone use based on cost alone as owners will have different tariff plans in place. Some of these give a number of free calls or texts per month, making use not directly mappable to monthly spend, so expanding this area of enquiry would require careful thought.

Although I was aware of not being intrusive in my data collection, it would have been interesting to use some more creative methodologies and ask respondents to carry out a task or monitor their own use. For instance, this could have been to not use their phones for a day and record the strategies they used to overcome any problems, or perhaps ask them to categorise the content of their phonebook or any saved text messages. In an effort to exploit the novel ways in which new technology leaves traces of their use, I did ask respondents to tell me the last 10 calls. However this rather small random snapshot of recent calls made did not yield much insight. The volumes were too small for statistical treatment. Perhaps repeating this exercise every day for a week might have enabled me to look at specific personal patterns of communication. Even then it may have been difficult to extract meaningful analysis from a large amount of data given the way usage patterns were linked to the contingencies of the users lives (e.g. their family structure and demands or their work). I was somewhat limited by the pragmatics of this work and the desire not to

be intrusive, but hopefully in the near future software developments may enable this to be done in an easier manner.

One of my advantages, the timing of the research, also proved a disadvantage. I would like to have spoken to non-users and explored their reasons for not adopting – were they financial, ideological or with some other basis? It would be very hard to resist adoption when all around are expecting you to carry a phone, and the opinions of these late (or non-) adopters would have been interesting. However, I would have needed to choose a slightly different window (perhaps a few years earlier) to capture these opinions as everyone I met used a mobile phone, and no one could direct me to a club member who was resisting ownership.

8.6.3 Analysis methods

I developed methods to analyse my findings which suited the data I had gathered, but also my own background and preferences. My experience in computing was certainly an advantage in that I was very used to analysing data through spreadsheets and setting up databases. I also found using a graphical technique somewhat akin to a 'mind map' a convenient way to put structure on a wide-ranging field of literature (see a reduced copy in appendix 6). Holding this all on one large (A1) sheet was a way of seeing the ideas as interlinked but structured and was for me a useful methodology in trying to assess the literature and integrate it into my writing.

In my study I wished to look at the communications patterns produced by a number of people in a network each carrying out large number of communication transactions daily. It would have been beneficial if I could have gathered data through the phone handsets and looked at these patterns in graphs, perhaps in a form similar to that used in social network diagrams. As already mentioned, the difficulties of gathering such data in an unobtrusive way and the data mining exercise required to extract useful patterns made this impractical. There are now new methodologies coming on stream which would make this more feasible. The traces we leave in cyberspace can be captured to produce new ways to track the paths people take in their natural activities of everyday life, and we are developing algorithms for 'big data' analytics which may be able to make sense of these kinds of relationships on a potentially massive scale. My work which combines ethnographic

and structured data may be a fruitful way to develop a robust understanding of such communication patterns.

8.6.4 Reflections on the theoretical approach

Although it was developed originally to examine the use of technology in the home, I have adopted the domestication approach here to look at how individuals take on a personal technology and make it part of their everyday lives. This has required a change in emphasis from earlier studies of the domestication of household technologies as to who the main actors might be in the choices around the artefact. In effect, when examining domestication for a personal technology the focus is on an individual rather than a group (the household) and the setting of use may be anywhere rather than just in the home. Appropriation and imagination phases are valid whether considered by an individual or a group. However, in the objectification and incorporation stages of, say a family television set, we are looking at decisions around its spatial and temporal positioning: which room in the household it is placed in, when it might be turned on or off. The 'moral economy' that Silverstone highlighted reflects who makes such decisions. For a personal device such as a mobile phone, decisions on objectification and incorporation are not subject to group agreement but simply translate to where it might be kept (in a pocket or handbag) and when and for what it might be used (relationship management). The choices reflect on an individual rather than a household, but the framework retains its integrity. In this research I think it stood up well.

I did find domestication somewhat limiting when I was trying to create a dialogue around ongoing use in the lifetime of a particular device. People's lives are constantly changing, and mobile phone consumption changes alongside this. We might lose a job, or move in with a partner, or have a baby, and our patterns of consumption are changed. This does not lead us to re-imagine, re-appropriate, re-incorporate or re-objectify, but we no longer are exhibiting the same patterns of use that we did previously. Domestication is a limited tool in such situations and perhaps that is not its role. However, as a means of explaining adoption it holds up well.

8.7 Suggestions for future research

As I worked through this research I identified a number of other issues which were outside the scope of my research questions but which I feel are worthy of further study:

- The concept of re-appropriation: There are few pieces of technology which we replace as frequently as the mobile phone (approximately every two years). New choices on models and tariff have to be negotiated each time. It would be interesting to study the reasoning individuals make on each occasion, and the research they might undertake to inform themselves.

- Social capital: The groups which I examined in this thesis were already strong in social capital. It would be interesting to see if my findings were replicated within a group which was floundering or was weak in terms of the reported definitions of social capital. It might also be of interest to examine the role of community groups in the current unfavourable economic climate and time of mass emigration, and the outcomes of this for local social capital.

- Rural/urban use of technology: My findings show cost and frequency of use as a significant difference in how rural and urban users engaged with technology and rural users in particular have difficulty with mobile phone reception. I would like to explore further any rural-urban differences in technology use, in particular with the demands of broadband internet technologies.

- Analysis of communication patterns through the use of 'big data': As mentioned previously there are new techniques for capturing and analysing large data streams which have the potential to yield interesting new insights into communication patterns. Having completed this study and also having a background in software and data analysis, I would like to look at the potential of 'big data' to help us to better understand how we communicate using EMCs.

8.8 Concluding remarks

Evidence from this research shows that the ownership of personal technologies can support us in managing an independent, self-determined life while also enabling us to stay closer to those we know and meet regularly. The GAA club members are using technology to follow their individual paths; they also use it to cement relationships with friends and family - to stay apart, yet grow closer at the same time. Contrary to what some of the literature might suggest, mediated communication is not replacing the desire for face-to-face socialisation or spelling the death of local community groups.

People are often very attached to their local area and friends – why might they allow a technology to take that away from them? In effect, why might anyone make a choice to do something which is detrimental to their quality of life? People use technologies as they offer convenience and control in their lives. This may have some undesired effects which go beyond the level of individual choice (e.g. elimination of public phone boxes as everyone has a mobile phone, just as widespread use of the car undermined public transport). However there is little evidence from this study to support the idea that directive social engineering is necessary to preclude perceived negative outcomes of a technology.

In fact, there is no simple deterministic outcome of technology ownership – it does remove old ways of doing things, but it also opens up new opportunities too and the result is a changed, rather than a replaced world. Some of the literature in the field proposes well-defined (and even radical) outcomes for the introduction and integration of new technologies. I find to the contrary a complex model of interaction where individuals are using technology to maintain autonomy and also to sustain their commitments to older forms of organisation. We need not consider that technology offers us an either/or scenario – it can sometimes afford us to do more and to encompass both old and the new.

Just as it can open up new opportunities, there are ways in which technology can also impose constraints on what we might wish to do. We may be bound by the limitations of our current technical knowledge to do things a certain way, and we may also have a price to pay by taking advantage of the opportunities offered through use. As Williams and Edge (1996) point out, technology does not impose

particular social choices, but may change the parameters on which individuals and organisations select paths of action. The communication affordances of the mobile phone open up new opportunities and people's choices of particular pathways may have opportunity costs. For example people may use the ability to communicate across time and space boundaries to extend their territories (geographical and of different domains of social life) that may have the effect of weakening other relationships. This can be seen as a form of 'soft determinism'.

My conclusions are driven by both my quantitative and qualitative data findings. In interview, club members and supporters describe how they assimilate the mobile phone very effortlessly into all aspects of their lives. It is there for club matters; it is also there for work, for college, and for family interactions. In fact it has become an integral part of their lives, seamlessly, and in a short period. It enables them to blend and incorporate the different worlds they may inhabit, worlds which in the past might have collided, in particular those of work and social life. Now they can be managed together, using the mobile phone.

The role of EMCs in contributing to active citizenship is paradoxical—they sometimes intervene to distract us from our interaction with others, and yet they also facilitate it. As members of a sports club, these individuals contribute to the civic engagement portion of what defines social capital. When using their mobile phones, they contribute to the social action portion. Old-style 'place and purpose' off-line community is alive not only in sports clubs in Ireland but also in neighbourhood groups in Chicago, the community gardens in Havana and the barrios of Barcelona. In all of these cases, 'real' community is practiced face-to-face, but technology can have a supportive role in keeping communications alive and facilitating the logistics of organizing the group. With just a little user innovation and careful use, the mobile phone can be a part of this equation.

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APPENDIX 1
INTERVIEW QUESTIONS 2006

Background:
Age. Gender. urban/ rural. Role in club – player/ management/ supporter.
Employment status?

Personal communication patterns:
Keeping in touch with family. Discuss response on form.
Keeping in touch with friends. Discuss response on form.
Keeping in touch with club/ community. Discuss response on form.

Appropriation:
How long have you had your own mobile telephone?
Did you buy it yourself?
(if not….. who bought it / gave it to you)
What led you to get it? (e.g. were there changes in your lifestyle at that time?)
You state you got it for……. is that still your reason for having it?
(if a gift….. were you thinking of buying one yourself at that time?)
How did you pick up the skills to use it? (e.g. just picked it up; friend told me; man in shop; the manual)
Is this your first phone or have you upgraded/ changed phone set since you got it?
Do you care about which model you are using?
Do you have a camera phone?
(if so, when do you use it? …ever for club photos?)
(if not, would you like one?)
What other features does your phone have? What features would you like?

Cost and payment:
You say you are…. pre/post pay… Why did you choose this method of payment?
The average call charges for mobiles in Ireland is €47 per month. Do you spend more or less than this?
Do you think it is expensive?
(if yes… have you investigated ways to reduce your costs? e.g. change carrier/ payment method/ limit calls)

APPENDIX 1
INTERVIEW QUESTIONS 2006

Patterns of use:

Where are you mostly when you use your mobile? (e.g. home, work, on the move)

Do you use voice or text most? In what proportion? When do you use each?

You say most of your voice calls are to…….. how might you have kept in contact with them before you got your mobile? Does using a mobile *replace* this connection?

You say most of your texts are to …….. how would you have kept in contact with them before you got your mobile? Does using text *replace* this connection?

Do you usually expect a reply from a text? How soon does it start an interaction?

Are you aware of any of the information services provided for mobile phones?

(if so… do you use these? Which ones?)

Do you ever refuse calls?

(if so….is this ok, or do you feel you need to excuse this behaviour?)

Lifestyle changes:

Do you believe having a mobile saves time? If so, can you give an instance of this?

Do you believe having a mobile saves travel? If so, can you give an instance of this?

How would you feel / manage if you were deprived of the telephone for a month – do you feel you would lose touch with anyone?

Have you changed your circle of contacts in any way due to using a mobile?

Club business:

Do you often make calls about the club games?

(if so… what for – fixtures? results?

… do you send or receive these)

If committee …in what ways do you use the mobile for club business? do you use voice or text calls? do you forward texts? Do you notice any particular differences in patterns of communication in the committee now that people use mobiles more?

APPENDIX 1
INTERVIEW QUESTIONS 2006

Community:

Think about the club members you are closest to. How do you keep in touch with them?

Do you ever talk to them on the mobile (or text them) about games?

Do you have the mobile number for all your friends in the club who carry a mobile?

(if no… you want to contact them, how might you find it out?)

Does having the mobile phone make you feel anymore 'linked in' to what is going on?

Are there club members you keep in touch with regularly who don't use a mobile phone? (if yes… how does this affect how you communicate?)

If you know someone has both a mobile and a fixed line phone, which would you call them on?

(if answer "it depends"… depends on what?)

Do you notice any particular differences in patterns of communication in the club now that people use mobiles more?

Attitudes:

I want to understand how you feel about the mobile phone. Is it important to your life?

If you were asked on a form (for example, driving licence application) for your phone number, would you give your fixed line or mobile?

Where do you keep the phone?

Do you have any reservations about its use?

(if yes….what are they?)

Other people's use:

Do you think there is place that mobile phone use shouldn't be allowed?

Does other people's use of mobile phones ever irritate you?

Future:

Do you envisage your future use of the mobile phone expanding?

Do you keep track of changes in the technology?

What do you understand by the term "3G"?

(if anything…does it interest you?)

APPENDIX 1

APPENDIX 1
FOLLOW-UP INTERVIEW QUESTIONS 2015

I am doing a follow up to research done 7-8 years ago when I made enquiries into use of the mobile phone in the community group (club). At that time the main way which the club officials kept in touch with members and players was through group texts. Now that the smartphone is being widely used and it provides us with new ways to communicate, I am looking at any changes which may have occurred in club communications. I have a few questions first of all about your own use of your smartphone, and then I'll go on and ask a few questions about how the club officials communicate with members and the club use of the internet.

YOUR OWN USE

Have you a smartphone? How long have you had it? What do you use it for apart from voice calls and text? Web? Email? Facebook? Have you any specific regular use that you make connected with club/GAA affairs?(e.g. apps)

Do most club members have a smartphone? Is it assumed you might have it (and MI) within the club (management)?

CLUB USE

Broadcast SMS:
In my last research I found that group text was the main way that the club communicated with people. Is this still used? If so, what for? (specifically social events, training, meetings, matches, results, changed arrangements). Would you say it is necessary for players/members?

Web:
I see there is a club website. What do you see as its function? Do club expect you to get information there? Do people often talk about the content of the website? Do you know do most people access it via phone or PC? Who maintains it? Would it ever be used for essential info – training, change match venues, meeting times etc?

APPENDIX 1
FOLLOW-UP INTERVIEW QUESTIONS 2015

Facebook:
How about the Facebook (FB) page? What do you see as its function? It is widely used (or just a small group of people)? Do people talk about FB posts? Do you know do most people access it via phone or PC? Who maintains it? Would it ever be used for essential info – training, change match venues, meeting times etc?
[(RURAL CLUB). The Facebook page is closed to public use. Why? It is essential reading for players?

Flicker:
(RURAL CLUB) I see the club has s a lot of photos up on Flicker. Do you know are these widely viewed? Do people talk about them? Download them? Do you know do most people access it via phone or PC?
(URBAN CLUB) Do you know does anyone post club pictures for sharing up on Flickr? Do you know do most people access it via phone or PC?

Twitter:
(RURAL CLUB)Does anyone use Twitter for club posts?
(URBAN CLUB) The club has an active Twitter account (690 following). Do you use this? What type of messages do you expect to see on it? Would it ever be used for essential info – training, change match venues, meeting times etc? Do you know do most people access it via phone or PC?

email:
Is email used in the club for messages? If so by whom and what for? Are group emails sent? Is there an assumption that you have access? Do you know do most people access it via phone or PC?

Personal Communications Questionnaire

This questionnaire is to find out about how you keep in touch with friends, family and other club members and supporters. In particular, it asks for information on your use(or not) of mobile phones. Please read all the questions carefully. Thank you for your help.

Firstly, some information about yourself. This is used to group answers so that we can draw some conclusions. You can not be identified by giving any of this information.

Are you? Male ☐ Female ☐

Your age group? Under 18 ☐ 18 – 25 ☐ 25 – 35 ☐ 35 - 45 ☐ 45 -55 ☐ 55 -65 ☐ over 65 ☐

What is your part in the club?

Player ☐ Supporter ☐ Administration (state position ……..…….) ☐

For each of the persons below, please indicate the types of contact you have made with them in the <u>past week</u>:

One member of your family (state relationship ……..)

Talk on mobile ☐ Text on mobile ☐ Talk on fixed line phone ☐

Meet ☐ email ☐ No contact ☐

Is this typical of how you contact your family?.....

.....

One friend

Talk on mobile ☐ Text on mobile ☐ Talk on fixed line phone ☐

Meet ☐ email ☐ No contact ☐

Is this typical of how you contact your friends?.....

.....

One club member

Talk on mobile ☐ Text on mobile ☐ Talk on fixed line phone ☐

Meet ☐ email ☐ No contact ☐

Is this typical of how you contact club members?.....

.....

If you use YOUR OWN MOBILE PHONE, please complete the section below.

Why did you first get a mobile phone? (tick one box only)

I wanted to keep in touch with people ☐ I need it for work ☐

My friends all had one ☐ I bought it for my safety ☐

I really like new gadgets ☐ My phone was a gift ☐

Other reason (please give details)…….

How do you pay for your phone?

Top-up my credit (pre-pay) ☐ Contract (post-pay)? ☐ Don't know ☐

Do you pay the bills yourself? Yes ☐ No ☐

How often do you make voice calls?

several times a day ☐ 3- 4 times per week ☐ less than once a week ☐ never ☐

Who do you mostly *speak to* on your phone? Family ☐ Club ☐ Friends ☐ Others ☐

How often do you use SMS ("texts") on your phone?

several times a day ☐ 3- 4 times per week ☐ less than once a week ☐ never ☐

To whom do you mostly *send text messages*? Family ☐ Club ☐ Friends ☐ Others ☐

Using your phone

Do you always carry the phone with you? Yes ☐ No ☐

Do you always have the phone switched on? Yes ☐ No ☐

Only complete the next section if you DO NOT USE YOUR OWN MOBILE PHONE.

Would you like your own mobile phone? (tick one box only)

No, I don' t want a mobile phone ☐

I don' t know ☐

Yes, but I can' t afford it ☐

Yes, other reason (please give details) ……

Any use?

Do you ever borrow a mobile phone? Yes ☐ No ☐

If the answer is Yes: who do you borrow from? Friends ☐ Family ☐ Other ☐

how often do you borrow it? Regularly ☐ Sometimes ☐ Rarely ☐

Thank you for your help in filling in the questionnaire. Would you like to help my investigations further by allowing me to interview you about your personal communication patterns? If so, can you give me a phone number so I can contact you? .....

Interview task

If you know how to access the information, categorise your last 10 calls received/ sent as recorded on your phone by ticking in the box to show who these were with.

SENT	Friend	Family	Sport	Work	Other
Last 1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

RECEIVED	Friend	Family	Sport	Work	Other
Last 1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

Looking at the pattern that has emerged, do you think it is typical?

……

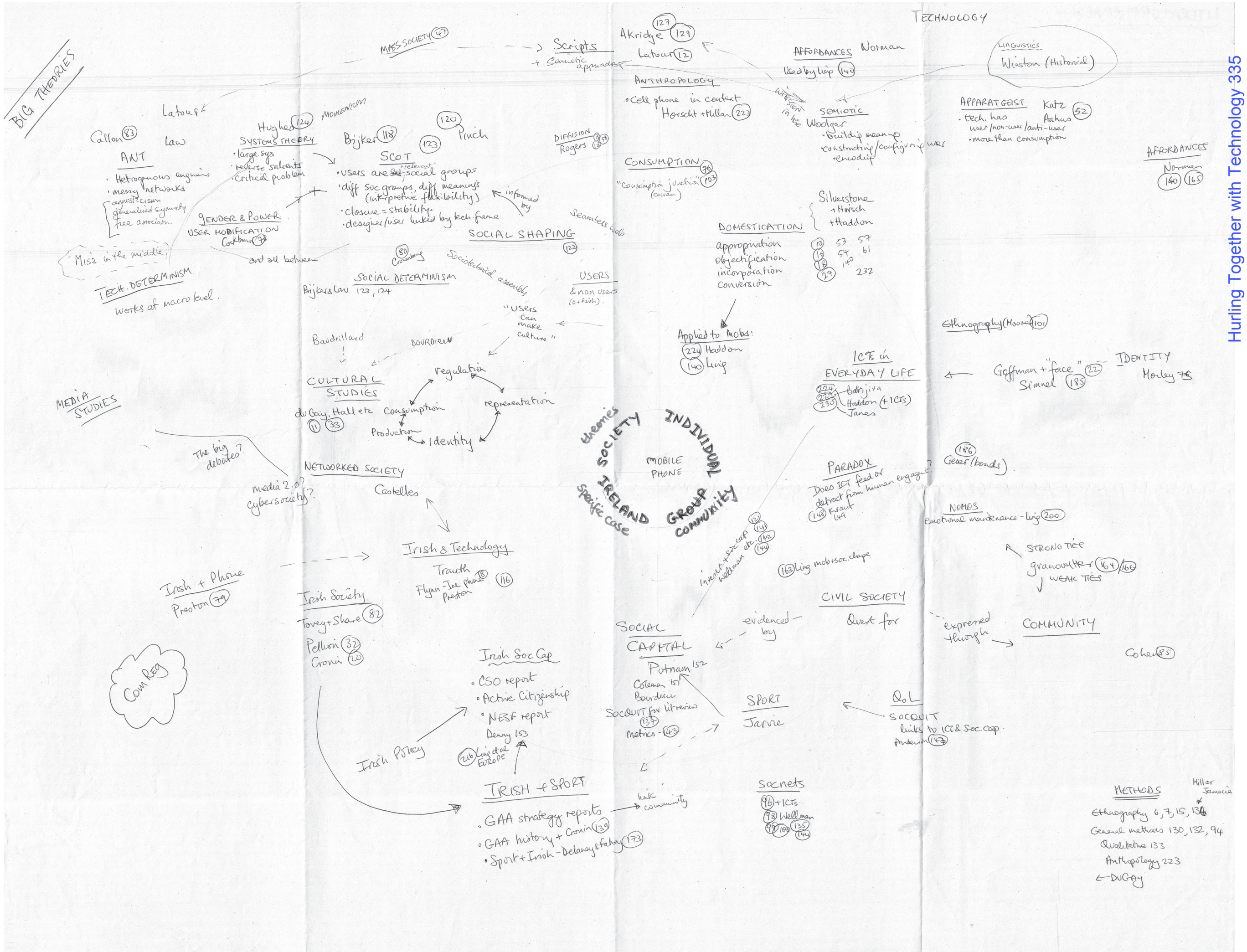
……

……

SPREADSHEET SUMMARY OF INTERVIEWS (REDUCED FROM A1)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
Gender	M	M	F	M	M	M	M	M	M	M	M	M	M		F	F	F	M	F	F	F	F
Age	25-35	35-45	25-35	18-25	18-25	18-25	18-25	35-45	25-35	18-25	25-35	25-35	25-35		18-25	18-25	35-45	45-55	45-55	25-35	23-35	25-35
employment	plasterer	engineer	mother	student	student	student		building	building	engineer	carpenter	carpentry	lorry driver		student	student			teacher trainer/ manager (OU)		lawyer	
club role	chair	treasurer	supporter	player	player	player	player	player	player	player	player	player	player		player	player	secretary	manager		player	player	player
family - main comm.	mobile + meet	all phone + meet	all phone + meet	mobile + meet	phone + meet	mobile + meet	text	mobile	text	mobile meet	mobile	text mobile	mobile + meet		mobile	mobile + meet	talk phone	talk mob	all	fixed	mobile	mobile email
friend - main comm	mobile + meet	all phone + meet	text mob	mobile meet email	mobile	mobile meet email	mobile voice	text	text	mobile meet email	mobile [illegible]	mobile	mobile		mobile meet	mobile meet email	fixed line	talk mob	all	all	talk mob	mob email
club - main comm.	mobile	mobile + meet	landline mob + meet	text meet	text	text	text	mobile	meet	mobile meet email	text	text	mobile		text + meet	mobile + meet	text	text	text	all	text	text email
how long own phone? (YRS)	6	4-5	2-3	7-8	5-6	2-3	8	4	8	5-6	8	7	6		8	7	5-6	6+	5+	[illegible]	7	11
buy self?	Yes	YES	NO - HANDED ON	NO - GIFT	NO - GIFT	YES	NO - GIFT	YES	NO - GIFT	NO - HANDED ON	YES	YES	YES		NO - GIFT	NO GIFT	NO - HANDED ON	NO GIFT	NO GIFT	YES	NO GIFT	NO GIFT
why buy?	WORK	'CULTURE CHANGE'	Safety - car	probably		contact friends		work			social	social	work									security
pick up skills	played [illegible]	picked up	played	picked up	picked up	picked up	picked up	picked up	picked up	picked up	picked up	picked up	shown (girlfriend)		picked up	picked up	shown (daughter)	shown (daughter)	shown (son)	picked up	picked up	picked up
upgraded?	yes (3-4/4yr)	yes	yes	yes	yes (3rd)	yes (4th)	yes	yes (5th)	yes (3rd)	yes	yes (4)	yes (few)	yes		yes (8th)	yes	yes	yes (3rd)	yes (2nd)	yes (4th)	yes	yes
care which model?	No	NO	yes - like Nokia	No	No	yes (small)	yes (not flip up)	yes (camera)	No	No	No	No	yes (not flip)		yes Nokia	No did once	yes neat size	yes Nokia	No	No camera	yes Nokia	yes radio
use a camera?	little	Sometimes pathetic pics.	No camera	yes school	No	yes social	Rarely	yes (kids)	yes (work)	No camera	No	No	yes (social)		No (rarely)	No did once	No	No	No camera	yes	yes messing	yes social
other features	No	games		voice recorder radio	No	internet	WAP	live!	email	No	voice recorder	vibrate	No		voice recorder	No	calender	No	No	No	yes tri band	yes radio
payment type	POST	PRE	PRE	PRE	PRE	PRE	PRE	POST	PRE	PRE	POST	POST	PRE		PRE	PRE	PRE	POST	POST	PRE	POST	POST
monthly spend (£ave)	> (100)	<	< (40)	<	<	< (35)	> (80)	(100)	<	< (40)	< (30)	> (50-55)	< (40)		< (35)	=	=	> (200)	>	< (20)	> (60)	> (60)
consider expensive?	YES (but needs)		yes	YES AND NO !	yes	yes	YES	yes but needs	NO	yes	No	No	yes		yes	yes	No	yes	no	no	yes	yes
changes (carriers)?	yes (for swap)			CHEAP MAY	yes - change to Meteor		change to Meteor	NO	No	No			No		yes - change to Meteor	No	No	yes tariff	yes tariff	No	yes want to post	yes move to post
Where most used	work/ home	car	home/ travel	college/ home	college	college	work/ home	work - travel	work	home	work	work + home	work		home/ travel	college	home/ work	work/ out	home	not work	not work	on move
voice: text proportion	60:40	50:50	1:2	30:70	1:4		1:2		1:2	1:2	80:20		1:3		1:5	60:40	1:2	1:2	10:90	1:2	1:2	70:30
voice replace or add	no landline	extra	extra	extra		replace	no landline	extra	extra	Replace	extra	extra	replace		replace	replace	replace	extra	extra	replace	replace	replace
text replace or add	REPLACE	extra	extra	extra				extra		Replace		extra	extra		replace	replace	replace	extra	extra	extra	extra	
how soon reply text	few mins		immed.	30mins	5-10 mins	4-5 mins	straight away	NO	5mins	1 day	10mins	5-10mins	few mins		10mins	few mins.		immediate	30mins		couple hours	immed.
Know of info services		yes	NO	yes	yes	yes	NO (Nokia man)	NO	yes	yes	yes	NO	yes		YES	YES	YES	YES	YES	YES	YES	YES
use info services		NO		yes succor	NO	NO	voice mail	yes!	yes (web)	yes voice	NO	NO	NO		NO	NO	YES CAA	NO	NO	NO	NO	NO
Ever refuse calls?	Rarely (private no.)	NO	NO	NO	NO	NO	NO	yes PRIVATE NUMS	yes PRIVATE NOS	NO	yes PRIVATE NUMBER	NO	yes PRIVATE NUMBER		YES	YES PRIVATE NUMBERS	NO	NO	NO	NO	NO	YES PRIVATE NO.
loose touch if no phone?	distant friends	NO inconvenience	YES	NO	NO	yes socially excluded	YES	NO	NO	YES	NO	NO	YES		NO	NO	YES	NO	NO	YES	YES	YES
changed circle friends?	more contact with mom	NO	WIDER	YES closer + wider	WIDER	YES WIDER	YES WIDER	NO	WIDER	WIDER	NO	NO	closer		NO	NO	WIDER	WIDER		WIDER	maintain old friendships	maintain old network
make club calls?	mass text	land line		yes text	yes voice	yes text	yes text	yes	yes	yes	yes	yes	yes		yes text	yes text	mass text	mass text	mass text	yes	text	text
committee use	mass text	rarely									mgr 0-21						secretary mass text	talk	text			
diff patterns now?		easier				more comm.	Friendlier		more comm. (inc. socially)	group texts	more	group text	more contact			less of personal contact	more use text	more talk		call included	more comm.	
Keep in touch club?		fixed + mobile	meet + text	mob	mob F2F	F2F	F2F	mob	mob	text	mob	text + mobile	txt + mob		txt	text	mob	mob	mob	mob	mob	voice text
comm. mobile re games? (POST MORTEM)	mobile talk	mainly landline	-	NO F2F (BAR)		NO 'waste time'	YES text	NO	yes	yes	NO (RARE)	NO	yes		NO (F2F)	text	mob	mob talk	NO (pub)	mob		email
Is for all clubmates	yes	NO	YES	yes	yes	NO 40%	MOST	yes	yes	NO (HALF)	yes 90%	yes (most)	MOST (70%)		NO	MOST	yes	yes	yes	NO 6/30	yes	most
feel locked in ?			yes	yes		NO	yes	NO		yes	NO				yes	yes						
first call mobile/fixed?	mobile	fixed	mobile	mobile	depends	first mobile	mobile	mobile	mobile	mobile	mobile	mobile	fixed		mobile	mobile	fixed	fixed	fixed	mobile	mobile	mobile
Important to you?	very		yes security	no - handy	yes		yes	yes			yes WORK	yes	yes		no	yes	yes	yes	yes	yes	yes	yes
Privacy # [on form]	mobile	landline	mobile	mobile	mobile	fixed	mobile	mobile	mobile	mobile	mobile	mobile	mobile		mobile	mobile	fixed	mobile	fixed	mobile	mobile	mobile
Reservations on use	coverage	not for young kids	NO	NO	NO	health	health	NO	hoax calls	NO	NO	NO	NO		NO	NO	NO	NO	NO	NO		YES health
Anywhere not allowed?	meetings	car	hospital	church	driving	schools	driving	hospital airport	church	meetings church	church meetings	car	road		driving restaurants	NO	mass	restaurant	church theatre restaurant	in company	meetings	stealing public transport
Others use irritate?	NO	slightly	use in presence	use in presence	driving	use in presence	driving	NO	NO	use in presence	yes use in presence	use in presence	yes		yes	yes library	NO	yes loud talk	yes loud talk	use in presence	yes meetings	bus
Will use expand?	stay SAME	expand	stay SAME	yes	yes	yes	yes	steady	stay steady	stay steady	steady	steady	expand		NO	yes	steady	yes	steady		steady	yes
Do keep track tech?	NO	yes	look at new models	yes	yes	NO	yes	NO	NO	yes	NO	NO	NO		yes	NO	NO	NO	NO	NO	NO	yes
3G ? What is it?	NO	yes	NO	yes	yes	NO	yes	NO	yes	yes	NO	NO	NO		yes	yes	NO	NO	yes	NO	yes	yes
SENT calls: friend	0	1	2	5	3	8	7		4	7	4	3	4		6	2	3	3	5	4	5	4
SENT calls: family	0	2	7	1	3	2	2		0	1	2	3	3		1	2	2	3	2	3	3	2
SENT calls: sport	10	2	0	1	3	0	0		2	1	0	0	2		1		4	3	3	2	1	0
SENT calls: work	0	0	0	1	1	0	0		4	0	4	3	2		0		0	0	0	0	0	0
RECEIVED calls: friend	2	1	4	7	3	8	6		5	4	2	4	1		7	4	3	5	4	4	6	5
RECEIVED calls: family	1	1	6	1	3	2	3		1	4	2	2	1		2	2	3	2	4	1	4	4
RECEIVED calls: sport	2	5	0	1	3	0	0		0	0	0	0	3		0		3	4	2	2	0	0
RECEIVED calls: work	5		0	0	1	0	1		3	0	6	3	3		0		0	0	0	0	0	0

	sex	age	club	famtalk	famtext	famfix	fammeet	famemail	famnone	paltalk	paltext	palfix	palmeet	palemail	palnone	clubtalk	clubtext	clubfix	clubmeet	clubemail	clubnone	whyget	howpay	payself	oftenvoice	whovoice	oftentext	whotext	carry	switchon
1	male	35-45	supporter	no	yes	no	no	no	no	yes	no	no	no	no	no	yes	no	no	no	no	no	work		yes	several/day	others	several/day		yes	
2	male	35-45	supporter	yes	no	no	no	no	no	yes	no	no	no	no	no	yes	no	no	no	no	no	keep in touch	post		never		never		yes	yes
3	female	35-45	supporter	yes	yes	no	no	no	no	yes	yes	no	no	no	no	yes	yes	no	no	no	no	gift	pre	yes			several/day		yes	yes
4	female	35-45	supporter	yes	yes	no	no	no	no	yes	yes	no	no	no	no	yes	no	no	no	no	no	safety	pre		<once/wk		several/day		yes	
5	male	18-25	player	yes	yes	yes	no	no	no	yes	yes	no	no	no	no	no	no	no	no	no	yes	keep in touch	post	yes			several/day	friends	yes	yes
6	female	25-35	supporter	yes	yes	yes	yes	no	no	yes	yes	no	yes	no	no	no	yes	no	no	no	no	gift	pre	yes	several/day	club	several/day		yes	yes
7	female	25-35	supporter	yes	yes	no	yes	no	no	yes	yes	no	yes	no	no	yes	yes	no	no	no	no	gift	pre		several/day		several/day		yes	yes
8	female	55-65	supporter	yes	yes	yes	no	no	no	yes	yes	yes	no	no	no	yes	no	no	no	no	no	gift		yes	3-4/wk		several/day		yes	
9	male	18-25	supporter	yes	yes	yes	no	no	no	yes	yes	no	no	no	no	yes	yes	yes	no	no	no	keep in touch	pre	yes	several/day	friends	several/day		yes	yes
10	male	35-45	supporter	yes	yes	no	no	no	no	yes	yes	no	no	no	no	no	no	no	no	no	yes	work	post	yes	several/day	others	several/day		yes	yes
11	male	35-45	supporter	yes	no	no	yes	no	no	yes	no	yes	no	no	no	yes	no	no	no	no	no	work		yes			several/day		yes	
12	male	45-55	supporter	yes	yes	yes	yes	no	no	yes	yes	yes	yes	yes	no	yes	no	no	yes	no	no	work	post	no	several/day	others	several/day		yes	yes
13	female	18-25	supporter	yes	no	no	yes	no	no	yes	yes	no	yes	yes	no	no	no	no	yes	no	no	gift	pre		3-4/wk	friends	never		yes	yes
14	female	25-35	supporter	yes	yes	no	yes	no	no	yes	yes	no	no	no	no	yes	yes	no	no	no	no		pre		several/day		several/day		yes	yes
15	female	25-35	supporter	yes	no	yes	yes	no	no	yes	yes	yes	yes	yes	no	yes	no	no	no	no	no	keep in touch	pre	yes	never		several/day		yes	yes
16	female	18-25	supporter	yes	yes	no	no	no	no	yes	yes	no	no	no	no	no	yes	no	no	no	no	keep in touch	post	yes	3-4/wk	family	several/day		yes	yes
17	male	18-25	player	yes	no	no	no	no	no	yes	no	no	no	no	no	no	yes	no	no	no	no	keep in touch	pre		3-4/wk		several/day		yes	
18	male	18-25	supporter	yes	yes	no	no	no	no	yes	yes	no	no	no	no	yes	yes	no	no	no	no	keep in touch	pre	yes	3-4/wk	friends	several/day		yes	yes
19	male	18-25	player	no	no	no	yes	no	no	yes	no	no	no	no	no	yes	no	no	no	no	no	like gadgets	pre	yes	several/day	friends	3-4/wk	others	yes	yes
20	male	18-25	supporter	yes	yes	yes	yes	no	no	yes	yes	yes	yes	no	no	yes	yes	yes	yes	no	no	keep in touch	pre		several/day	friends	several/day	friends	yes	yes
21	male	45-55	admin	yes	no	yes	yes	yes	no	yes	no	yes	no	no	no	yes	no	yes	yes	yes	no	keep in touch	pre	yes	several/day	family	<once/wk		yes	yes
22	male	18-25	player	yes	yes	yes	yes	no	no	yes	yes	yes	yes	no	no	yes	yes	no	no	no	no	keep in touch	pre		several/day	family	several/day		yes	yes
23	male	25-35	player	yes	yes	no	yes	yes	no	yes	yes	no	yes	no	no	yes	no	no	yes	no	no	keep in touch	pre	yes	several/day	friends	several/day	friends	yes	yes
24	female	55-65	supporter	yes	no	no	no	no	no	no	no	yes	no	no	no	no	no	no	no	no	yes	safety	pre		3-4/wk	family	<once/wk	family	no	no
25	male	35-45	player	yes	yes	yes	no	no	no	yes	yes	yes	yes	yes	no	yes	no	no	yes	no	no	work	post	no	several/day	friends	3-4/wk	club	yes	yes
26	male	55-65	supporter	yes	no	yes	no	no	no	yes	no	no	no	no	no	no	no	no	no	no	yes		pre	no	never		never		yes	no
27	male	35-45	supporter	no	no	no	yes	no	no	yes	no	yes	yes	no	no	yes	yes	yes	yes	no	no	keep in touch	post	yes	several/day		never		yes	
28	male	18-25	supporter	yes	yes	yes	yes	no	no	yes	yes	no	yes	yes	no	no	no	no	no	no	yes	keep in touch	pre		several/day	family	several/day		yes	yes
29	female	55-65	admin	yes	yes	no	yes	no	no	no	no	yes	yes	no	no	yes	no	yes	no	no	no		pre	yes	never	family			yes	no
30	male	55-65	supporter	yes	no	no	no	no	no	yes	no	no	no	no	no	no	no	no	yes	no	no	work	pre	yes	3-4/wk	family	<once/wk	family	yes	yes
31	male	35-45	admin	yes	yes	yes	yes	no	no	yes	no	yes	yes	no	no	yes	no	yes	yes	no	no	keep in touch	pre	yes	several/day	family	3-4/wk	family	yes	yes
32	male	35-45	supporter	yes	no	yes	no	no	no	yes	no	yes	no	no	no	no	no	no	no	no	yes	free	pre	no	never		3-4/wk		yes	
33	male	25-35	player	yes	yes	no	yes	no	no	yes	yes	no	yes	no	no	yes	yes	no	no	no	no	keep in touch	post		several/day	others	several/day		yes	yes
34	male	35-45	admin	yes	yes	yes	yes	no	no	yes	yes	yes	yes	no	no	yes	yes	no	yes	no	no	keep in touch	pre	yes	3-4/wk	family	3-4/wk	family	yes	yes
35	female	25-35	supporter	yes	yes	yes	yes	no	no	no	yes	yes	no	no	no	no	yes	yes	yes	no	no	safety	pre	yes	3-4/wk		several/day	family	yes	yes
36	male	18-25	player	yes	yes	no	yes	no	no	yes	yes	no	yes	yes	no	no	yes	no	yes	no	no		pre	yes	3-4/wk	family	several/day	friends	yes	yes
37	male	18-25	player	yes	yes	yes	yes	no	no	yes	yes	no	no	no	no	no	yes	no	no	no	no	gift	pre		several/day	friends	several/day	friends	yes	yes
38	male	18-25	player	yes	yes	no	yes	no	no	yes	yes	no	yes	yes	no	no	yes	no	no	no	no	keep in touch	pre		several/day	friends	several/day	friends	yes	yes
39	male	18-25	player	no	yes	no	no	no	no	yes	no	no	no	no	no	no	yes	no	no	no	no	keep in touch	pre	yes	3-4/wk	family	several/day	club	yes	yes
40	male	35-45	player	yes	yes	yes	no	no	no	no	yes	no	no	no	no	yes	yes	no	no	no	no	work	post	yes	several/day	family	3-4/wk		yes	yes
41	male	25-35	player	no	yes	no	no	no	no	yes	no	no	no	no	no	no	no	no	yes	no	no	gift	pre	yes	3-4/wk	friends	several/day	family	yes	yes
42	male	18-25	player	yes	yes	no	yes	no	no	yes	yes	yes	yes	yes	no	yes	yes	no	yes	yes	no	friends had one	pre	yes	3-4/wk	friends	several/day	friends	yes	yes
43	male	25-35	player	yes	no	no	no	no	no	yes	no	no	no	no	no	no	yes	no	no	no	no	work	post	yes	several/day	family	3-4/wk	club	yes	yes
44	male	25-35	player	yes	no	no	yes	no	no	yes	no	no	no	no	no	no	yes	no	no	no	no	friends had one	post	yes	several/day	friends	several/day	friends	yes	yes
45	male	25-35	player	yes	yes	no	yes	no	no	yes	yes	no	no	no	no	yes	yes	no	no	no	no	work	pre		several/day	family	several/day	club	yes	yes
46	female	18-25	player	yes	yes	no	no	no	no	yes	yes	yes	yes	no	no	no	yes	no	yes	no	no	friends had one	pre	yes	several/day	friends	several/day	friends	yes	yes
47	female	18-25	player	yes	yes	no	yes	no	no	yes	yes	no	yes	yes	no	yes	yes	no	yes	no	no	gift	pre		several/day		several/day		yes	yes
48	female	35-45	admin	yes	no	yes	no	no	no	no	no	yes	no	no	no	no	yes	no	no	no	no	friends had one	pre		3-4/wk	friends	several/day		yes	yes
49	male	45-55	admin	yes	no	no	no	no	no	yes	no	no	no	no	no	no	yes	no	no	no	no		post	yes	several/day	club	several/day		yes	yes
50	female	45-55	admin	yes	yes	yes	yes	yes	no	yes	yes	yes	yes	yes	no	no	yes	no	no	no	no	gift	post	yes	3-4/wk		several/day		yes	yes
51	female	25-35	player	no	no	yes	no	no	no	yes	yes	yes	yes	yes	no	yes	yes	no	yes	yes	no		pre	yes	3-4/wk		several/day		yes	yes
52	female	25-35	player	yes	yes	no	no	no	no	yes	no	no	no	no	no	no	yes	no	no	no	no	gift	post	yes	several/day		several/day		yes	yes
53	female	25-35	player	yes	yes	no	yes	yes	no	yes	yes	no	yes	yes	no	no	yes	no	yes	yes	no	keep in touch	post	yes	several/day	friends	several/day		no	no


BIG THEORIES
MASS SOCIETY (47)
Scripts
+ Semiotic approaches
Akridge (127) (129)
Latour (12)
TECHNOLOGY
AFFORDANCES Norman
Used by Luig (140)
LINGUISTICS
Winston (Historical)
ANTHROPOLOGY
• Cell phone in context
Horsch + Hillan (223)
Latour
Law
ANT
• Heterogenous engineering
• messy networks
agnosticism
generalised symmetry
free associatn
Callon (83)
Hughes (124)
SYSTEMS THEORY
• large sys
• reverse salients
• critical problem
MOMENTUM
Bijker (118)
SCOT
(120)
Pinch
(123)
• users are ~~social groups~~ "relevant" social groups
• diff soc groups, diff meanings (interpretive flexibility)
• closure = stability
• designer/user linked by tech frame
informed by
DIFFUSION Rogers (3) (58) (13)
CONSUMPTION (76)
"Consumption junkies" (103)
(Cohen)
SEMIOTIC
Woolgar
• Build in meaning
• constructing/configuring user
• encoding
APPARATGEIST
• tech. has user/non-user/anti-user
• more than consumption
Katz
Aahus (52)
AFFORDANCES
Norman
(140) (165)
Misa in the middle
TECH. DETERMINISM
works at macro level.
GENDER & POWER
USER MODIFICATION
Cockburn (73)
and all between
SOCIAL SHAPING (122)
Seamless web
Silverstone + Hirsch + Haddon
(10) 53 57
(19) 54 61
(13) 140
(29) 232
DOMESTICATION
appropriation
objectification
incorporation
conversion
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RECOMMENDATIONS OF TASKFORCE FOR ACTIVE CITIZENSHIP

Participation in the democratic process

- Establishment of an independent electoral commission to encourage everyone who is eligible to register and vote in elections, to support voter education programmes and to provide data, research and analysis on political engagement and awareness.

The public service and citizens

- That reinforcing and strengthening the ethos of the public service, based on respect for the citizen, continue to be a core objective of public service reforms including a renewed emphasis on effective consultation and associated training for public servants
- The group insurance scheme open to members of Local Community and Voluntary Fora should be promoted widely amongst relevant organisations/groups
- An initiative to help community and voluntary organisations to meet compliance costs and ensuring these costs are proportionate
- Funding schemes be strengthened to support capacity development amongst community and voluntary organisations particularly in eth area of training
- A programme be introduced in the public service to promote community engagement and participation, for example, providing some time off for voluntary effort and through pre-retirement courses

Community Engagement and Promoting a Sense of Community

- Adoption and promotion of a National Active Citizenship theme each year to stimulate local initiatives and events. The initiative would culminate in an Active Citizenship Week.
- Introduction of National Presidential Citizen Awards to recognise outstanding contributions to civic and community life.
- Local Authorities should prioritise the provision of community and recreational facilities as a part of the planning process.
- An audit of existing community facilities should be undertaken by local authorities through the County/City development boards.
- Better use should be made of schools at evening and weekend time to act as community hubs.

Education for Citizenship

- Expansion of education for citizenship in eth school system and in the youth and adult education sector.
- An initiative to promote, support and link together citizenship initiatives across the Higher Education sector.
- Development of a certificate/award which would be earned through completing at least three months volunteering or community involvement activity.

APPENDIX 7

RECOMMENDATIONS OF TASKFORCE FOR ACTIVE CITIZENSHIP

Ethnic and Cultural Diversity and the Challenge of Engaging Newcomers

- Community and voluntary organisations should be encouraged to undertake pro-active initiatives to reach out and engage with newcomers to Irish society
- A formal citizenship Ceremony should be introduced to mark admission to Irish citizenship.
- Information material and short education courses should be developed on Irish citizenship.

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Inside The Circle: Using Broadcast Sms In A Sports Club

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Abstract

With over 100% penetration, the mobile phone has become a normalised part of everyday communications in Ireland. This paper examines the use of the mobile phone within two Irish sporting clubs and finds that in both the regular practice of communication has been transformed by the use of broadcast SMS text messages sent using the 'distribution list' facility on handsets or through the web. The SMS are sent by club administrators for information distribution and as reminders for gatherings, causing an increased cohesiveness within the group.

For the administrators, broadcast SMS offers a convenience in what is a voluntary job, communicating information on fixtures, matches and training, essential for the smooth running of the club. For the club members who receive the SMS, the distribution of such information through their mobile phone has saved time and minimised travel, while strengthening their ties to the club. Both groups are enthusiastic and quote instances of how it provides new opportunities to them and how they can plan their lives around this new way of working.

Introduction and Background

The growth of mobile phones in Europe has been well documented (Dunnewijk & Hulten, 2006), and Ireland is no exception. Although the fixed line telephone was never as ubiquitous as in other European countries (Flynn & Preston, 1999), when the mobile phone became widely used for social interaction in the late 1990s, the Irish population were quick to adopt. Penetration has now reached 111%, (March 2007 figures) (ComReg, 2007). Irish mobile phone users are also avid users of the SMS service, sending on average 117 text messages per subscription per month. This reflects the "maturity of the Irish SMS market and popularity of SMS amongst young people" (Gilligan & Heinzmann, 2004:9).

Once with an economy firmly based in agriculture, Ireland owes it recent economic success to the information industry, and has a consequent growth in urban development, particularly along the east cost around the capital, Dublin. However, much of the rest of the country still reflects a widely distributed population, in particular the west (the location of this study) where 58% of the population live in small villages or open countryside linked by a few main routeways and many small roads, and with a poor public transport infrastructure. (CSO, 2003)[1] For this population, the necessity for a mobile phone takes on different meanings to those which have been described in many of the urban-based studies of young people.

The sports clubs explored in this paper comprise geographically located communities, people who live

[1] In the West, only 41.8% of the population live in towns of 1,500 people or more. The population density in this area is approximately 32 per km².

within perhaps 10 kilometres of each other, and who regularly meet to follow their common interest in the traditional Irish sports of hurling and Gaelic football. The members of these groups were meeting and communicating long before the mobile phone was available, and so the technology per se is not enabling them to come together (as might be considered with Internet communities), but rather providing a new tool to enhance their repertoire of correspondence. The clubs have integrated the use of the mobile into their everyday patterns of communication in order to keep members informed and minimise the work and travel involved in bringing people together.

In many western countries, studies have described the decline of local communities and the consequent loss of social capital (Putnam, 2000), and this has been mirrored by Irish research (NESF, 2003)[2]. However, much as Irish people may not be linking to their neighbours or volunteering for local ventures in the numbers they once did, evidence shows that sports activities are still well supported (Delaney&Fahey, 2005), and that both active and passive participation is high. This is particularly true for the traditional Irish sports, which are administered by the Gaelic Athletic Association (GAA) and are strong at a local level throughout the country.

The GAA is the largest sports body in Ireland, with more than 2,500 clubs on the island. These are run as voluntary, community-based initiatives which usually draw their membership from the local district, and are particularly strong in rural areas. The emphasis on community is stated in the aims of the organisation:

> *"The GAA club should … [be] one that provides leisure and social activities for all ages and genders in its community. The Association and its clubs should also become involved in non-team based activities, by supporting local developments, promoting cultural activities, … supporting schools and contributing to community infrastructure." (GAA, 2002)*

There are two main games played, hurling and Gaelic football, and competitions are organised between clubs in each of the 32 counties, with progression to a country-wide competition. Each county also fields a team, with members drawn from the clubs within it. The level of interest in inter-county competitions is very high and provides a talking point for the whole country at competition peak times. The sports are also encouraged through a number of active schools competitions, and most clubs field a number of children's teams Considering that this is a non-professional game, the levels of commitment put in by players often matches those of their semi-pro peers in other sports. The organisation is centrally administered by a paid staff in the Dublin headquarters, located in a state-of-the art stadium, but clubs retain autonomy over their activities, and all club work is voluntary.

[2] The Irish government have consulted with Putnam and actively speak about the importance of 'social capital' which could be lost by the increase of individualisation and commoditisation. They have set up a number of task forces to promote civic participation throughout the country. See http://www.activecitizen.ie/.

The game plan: Research outline

This research is based on interviews with 22 club members and supporters, exploring their use of the mobile phone for social and organisational interaction. It is backed by a survey (n = 40) gathered at local games. Players, supporters and management from two clubs participated – a hurling club (male players) located in a rural area in the West of Ireland, and a ladies' football club in Galway city, the largest conurbation (72,500 people) on the Atlantic seaboard (CSO, 2007). The research objective is to examine how mobile phone use is altering personal communication patterns among those with existing close ties. Focusing this within the GAA clubs gives access to community groups who exist within a local geographic area, and whose main communication lines have historically been with face-to-face communication. It might be assumed that the mobile phone would offer new opportunities to extend and develop these existing relationships.

During the main playing season, April through to September, teams play at least once per week, and clubs need to have regular communications with their players on activities such as fixtures, training and results. Since the nature of the sport is that people are away from their home base while participating, mobile phones are the main form of communication being used for social interaction by all concerned. They are used in a number of scenarios within the club: by administrators for their management and for intra-club communication, and by the players and supporters to stay in touch with both the club and each other. Mobile phone ownership is a given for this cohort - all of the interviewees have their own phones, and when asked they could not name anyone of their friends or acquaintances who did not carry one.

Creating our own match strategy: Club administration

Each GAA club has a formal committee who are responsible for the day-to-day running of the club and its premises (clubroom, social centre and pitches). Communication on match arrangements (fixtures and training) would originally have been done by face-to-face contacts – calling at houses, passing messages through others, or having an announcement made in the local church. In more recent years, the fixed line telephone may have reduced the amount of work this engendered, but burdened the secretary with many calls in order to ensure everyone was informed. This work has largely been replaced by the use of broadcast SMS messages sent to mobile phones.

The ability to broadcast SMS messages is the "killer application" for both GAA clubs. Sending an SMS message to a group of people can be done either through web-to-phone access, or using the 'Distribution List' facility found within the software of (some) handsets. All of the Irish mobile phone service providers offer a limited number of free texts per month (up to 300) and the facility through their websites to send

texts, in a single transaction, to all members of a pre-specified group.

For the clubs, broadcast SMS enables contacting a pre-specified group of members with a single message, a facility that is not available on land-line telephones, and provides a speedy option for distributing information on matches and training. It also ensures that everyone gets the same information, and because of its asynchronous aspect, the receiver doesn't have to be present to accept a call. The club administration staff use broadcast SMS messages for a variety of reasons – organising meetings, reminders for training, and providing information on game fixtures.

One of the duties of the club secretary is to convene meetings, which usually take place on a monthly basis. To ensure maximum attendance, the secretaries of both clubs have taken it upon themselves to send reminders to the committee of the upcoming meeting. The secretary of the ladies club explains:

> *"You would always have been able to contact people, so text replaced phone calls. … Now it's just handier to make a distribution list and the one text and send it to everybody." (female, club secretary, aged 35-45)*

Each adult team within the clubs has its own manager, and these managers also use broadcast SMS to remind their players of upcoming training and matches. This would originally have been done by announcing details of the next meeting to all gathered in the dressing room after a game or training session, and in that busy space, players frequently did not register what was being said. Getting an SMS message means not only do they receive the message, but they also don't have to recall all details as these are stored in the phone's 'inbox'; in effect they carry the reminder with them wherever they go. As one player remarked:

> *"It's easier to have a message on your phone, whereas, if you get it by post, you'll just leave it on the [kitchen] counter and forget about it." (male, player, aged 25-35)*

Using broadcast SMS not only ensures the members won't forget a meeting; it also gives flexibility to the organisers around arrangements. In the past, changes such as training at a different location, or new timing for a match would have meant trying to contact a large number of people in a short time, and calling off a session in the case of, say, poor weather, was not undertaken lightly. This new flexibility means that everyone can be informed of any changes directly and quickly

The managers and committee members are all very enthusiastic about the new affordance provided by broadcast SMS. Talking about her use of the technology, one manager says:

> *"I do that a few times a week. I find it very, very good. To do it by land line you'd have to hang up the phone, and lift it again, and dial every number … [and] …engage in conversation, and sometimes the person wouldn't be there, and you'd have to go back and try that number again later. At least with a text message it's gone. And whether they*

> *read it there and then, or read it the next day, it will deliver eventually... It is fantastic." (female, manager, aged 45-55*)

The club members who receive the SMS are passive in this transaction – they only reply if they can't make the session. However, they too are very positive about its use. They appreciate the timeliness and speed of the information they receive, with one member describing how previously a decision on fixtures taken by a county committee on Monday evening might then have been communicated by post. This entailed the secretary writing postcards on Tuesday, and players waiting until these arrived before having confirmed arrangements:

> *"... at one time you wouldn't know until Thursday or Friday. Now, withthe phone you know Tuesday morning." (male, player, aged 25-35)*

Getting speedy updates on changes to venues or cancellation of a match due to weather conditions also eliminates unnecessary travel, an important factor especially for rural dwellers.

Interestingly, the one exception to sending group texts in each club was when wanting to send a message to underage players. The managers explained that either because the players didn't have mobiles themselves, or perhaps that the message should go to the parents who would be bringing them to matches or training session, it was often better to use another approach. In one instance, the players were all attending the same local school, and during term time that was a point of contact where a message could be delivered to the group as a whole. Only in the summer months did the manager need to call, and that was to the home rather than to the individual.

Normally club information SMS messages are sent out to everyone only by the management. However, sometimes texts are also sent as a 'daisy-chain' from player to player, not using a distribution list but rather as a 'pass it on' type message. One player described how he had got a text a few days earlier which had been 'doing the rounds':

> *"Tomorrow evening now we have the underage [players] receiving medals, and the older members of our club say 'Please show up, because they love to see you coming, they look up to the older lads.' And everybody got a text... I got it two or three times, off different people, so I'll definitely go up tomorrow night." (male, player, aged 25-35)*

The team effect: Changing attitudes since group text

Club members are an already close social group who all live within the same area, may have gone to school together, are often related, and have a shared background and history. They also meet regularly face-to-face, seeing each other a few times a week to play football or hurling. Overall, the mobile phone

communications serve to strengthen these (already strong) ties. Among themselves, members use text messages frequently, often to arrange face-to-face meetings, something which can be difficult for rural dwellers who do not live in easy proximity:

> *"It's very handy when you can just text all your friends and meet up, like. And I suppose the relationship is stronger, the more we see of each other." (male, player, aged 25-35)*

A number of members remarked on the bonding effect of increased personal phone communication:

> *"...[with the mobile] ...you would be closer to the friends you've had for years." (male, player, aged 25-35)*

When asked about the changing patterns of communication within the club brought about by mobile phone use, all of the interviewees mentioned the broadcast SMS sent by the administrators, usually referring to them as "group texts". They described how being included in the team panel or committee who receive group texts created a sense of integration into club affairs:

> *"... makes you feel inside the circle, like." (male, player, aged 18-25)*

This point was more pertinent for younger or newer members than for others whose role was assured due to their long-term team membership or local renown as successful athletes. This feeling of inclusion has been found in other studies of group text systems, such as that of Farnham and Keyani who implemented a group text message system among a number of socially active friends. (Farnham & Keyani, 2006) In their analysis, members reported a strong sense of connection to the group, even for those who did not themselves ever broadcast messages. In a study of the impact of computer networking on community, Kavanaugh surveyed parents who were sent information through email by a school board, which in effect is the computer equivalent of a group text (Kavanaugh, 1999). In this case, 91% of respondents reported that having school issues communicated to them through the list had made them feel more involved in school issues. Being included in an information ring appears to automatically bind members to a group.

The effects of inclusion generated by the broadcast texts has also had ramifications for the social capital of the group. Social capital has been defined as:

> *"the degree to which a group ... uses mechanisms such as social networks, trust, reciprocity and shared norms and values to facilitate collaboration and cooperation." (Ling, 2004a)*

It is a topic which has engaged the Irish government in recent years, as they are concerned that Ireland's new-found wealth has lead to a decline in how citizens might contribute to civic engagement and volunteer to support a healthy society. The role of ICTs in social capital formation has been explored in several studies (Pigg & Crank, 2004; Ling et al., 2003; Ling, 2004a; van Bavel et al., 2003; Wellman et al.,2001; Quann-Hasse & Wellman, 2002; Anderson, 2004)

Social capital is commonly considered to take two forms. These can be "bonding", which suffices to keep a

group closely connected, and "bridging", which forges links across disparate groups (Ling, 2004a). In ways participating in a GAA club can act feed both forms. It bridges society as it is recognised in bringing together people of different politics, professions, and income groups[3]; and it bonds them in a way that they consider those outside the club (or in other clubs) as a distinct "other", at least for the day of the match, and in the case of long-term rivals, as a permanent target of difference, as exposed by the colours one wears. By their very membership of the club, and the voluntary nature of their contribution, players and club administrators are engaged in generating social capital. When broadcast SMS is used to remind and encourage others to participate, it is acting to maintain (and strengthen) the existing cohesion of the group as a whole, or bonding social capital. Since the broadcast SMS are sent within the club only, they do not in any way contribute to the bridging aspects of social capital

The group texts also engendered feelings of egalitarianism within the club. Since everyone receives the same message, from the same source, at the same time, no others in the group have extra or 'insider' knowledge. As one club player put it:

> "It is good because everyone gets the same texts. There is no one better than anybody else, everyone is kept in the same loop, and you can't say you didn't get it." (female, player, aged 25-35).

Similar results have been reported by Weare et al. in their examination of the use of email for inter-group communication in voluntary community organisations. They reported that the

> *"... broadcast capability of the internet may allow information to be shared throughout a group efficiently, and thus reassure members that they are on an equal footing where information access is concerned." (Weare et al., 2005)*

Even the club committee members who sent the SMS were aware that they were creating important feelings of inclusion, and the delicate diplomacy ensuing:

> *"... people feel left out if they aren't informed of something, whereas if quite a few people are informed, and you are the one who is not, you'd wonder why, …they expect it." (male, treasurer, aged 35-45)*

Although using a centralised form of distribution, group texts are thus seen to disseminate power (in the form of knowledge) through spreading information.

Although no club members referred to them in this way, one could also consider these texts to be a form of control. The content of texts are directive, and while they remind players of events, they also set an expectation as to their behaviour in attending them. There has been much written on the role of mobile phones as an 'electronic leash' whereby parents keep tabs of their offspring and children 'kickback' to

[3] "The GAA ... has a wide social class spread in its membership: while 40 per cent of its members are from either the skilled or semi-skilled manual classes, 33 per cent are from the higher or lower professional classes." (Delaney & Fahey, 2005)

subvert this (Ling & Yttri, 2005). On a more macro level, broadcast SMS in particular has been used as a form of control in political contexts (Linchuan Qui, 2007). In future, club administrators may need to be careful that they do not over-use the broadcast SMS facility otherwise they may be viewed as monitoring rather than reminding members of their obligations. They may also need to be careful of the style in which the text is written. In fact, one player admitted that she sometimes ignored the group texts, which she recognised as being a generic message due to how they were worded:

> *"I would say that group texts are very impersonal. Say for example I get a text 'We definitely have training this evening at 7 o clock', people might ignore it, and say 'That's a group text'. Whereas if it was sent directly, 'Hi Sandra, make sure you train this evening', you'd probably pay more heed to it." (female, player, aged 25-35)*

The group text is in this case having the effect of distancing her rather than bringing her close.

While welcoming the club group texts, club members did not have a positive attitude to information texts such as those provided as a paid service (usually referred to as 'text alerts'). Only two were subscribers, both receiving sports information. In fact several respondents quoted negative experiences, either their own or a friend's, where they had signed up for such alerts, but found the service expensive as they received more than they expected, and subsequently had difficulty signing off the service. The positive attitudes towards incoming club texts was due to the fact that they know the incoming club texts are going to be directly relevant to their chosen leisure time activity and help to plan their week. The texts received from the club are also free to receive. However, one might speculate that even these might possibly be unwelcome if they were too frequent or extended beyond what is deemed necessary information.

Lessons from the sideline: Analysis

Broadcast SMS is a feature offered by both handset manufacturers and service providers, so it is not surprising that the club administrators might use it to communicate with their members.

What is perhaps unexpected is that the wholesale adoption of this 'way of using' the mobile phone has had a fairly radical change in the overall patterns of club communication and has caused the clubs to shape their work practices around it. Also significant is how its enthusiastic acceptance by club members has had a positive affect on the dynamics of the group as a whole, a fact which makes its presence now a necessary part of club interaction.

There are many instances of users shaping telephone technologies in ways that their designers did not anticipate. In the early 1900s farmers in rural parts of the United States created their own 'barbed wire' networks (Fischer, 1992); it was kin-keeping telephone calls made by women which led to the acceptance

and eventual dominance of telephones for social use (Moyal, 1995); and more recently the use of texting as a cheap means of staying in touch by teenagers established SMS as a new mode of communication (Ling, 2004b). In each instance, everyday patterns of contact were made easier by users adapting the available technology to suit their own needs. This is what is happening in the sports clubs.

The incorporation of broadcast SMS into club work patterns is an example of user innovation not by technologically skilled or elite users, but by everyday end users. Club members are not even particularly enthusiastic about their mobile phones, and in interview have described its role in their lives as a functional tool, not as a fashion object or technical gadget:

> *"It's not that it's important to me in my life, obviously, like, it's something that's very, very handy." (male, player, aged 18-25)*

Haddon describes such creative use as:

> "daily acts of 'innovativeness', routine ways in which users actively manage their technologies." (Haddon, 2005)

The use of group texts in both clubs, which are geographically distant and not linked in any way, might suggest that this is a somewhat natural development of use which has evolved independently in both places, rather than being a novelty application which has spread through club connections.

Although a key technology in this case, SMS is generally not considered to be suitable for administration work. In one of the few studies on this topic, Svendsen et al. compare the use of SMS and email in office environments in a Scandinavian town (Svendsen et al., 2006). The authors conclude that SMS as a tool does not align with work practices in the way that email does, citing the fact that most people carry only their personal mobile phone, and prefer to use fixed line phones (paid for by their employer) rather than take on the added cost on their own mobile account. In the GAA clubs, administrators are regular club members who volunteer their time and energy to the club, taking on their post usually for one year. When doing this voluntary work, they do not use a club-provided handset, but in effect also volunteer the use of their own mobile phone, and personally pick up any costs that might accrue through sending the messages. Although they may have purchased their phone for social (recreational) use, they are actually adopting it as a work tool. In interview, no-one mentioned the added cost of keeping in touch with club members, probably because currently broadcast SMS is offered as a cheap feature (multiple sends for a single price, or with free access through the internet).

Using broadcast SMS has limitations as an effective work tool. To use the free group texts facility through a website, the phone owner must first log on using their own account details to set up a user profile. When they enter the names to be included in the group text, they set up a group which is only accessible through this profile – unique to their account. Thus, if a manager sets up the names of 20 players onto a list

entitled, say, 'senior players', and then resigns their voluntary post at the end of the year, they cannot easily pass on the details to the next manager - all numbers must be entered again. Similarly, if they use the operating system of their own handset to set up a distribution list, they cannot easily move this to the handset of an incoming manager when they resign. As a work practice, the use of personal mobile phones in this way means that the data is 'owned' by the phone user, not by the entity on whose behalf they are doing the work.

The ease of using broadcast SMS and its popularity with recipients would suggest that it will in future become a normalised and expected part of club interaction. For administrators without a computer to hand (or for use 'in the field'), it is most convenient if they have a facility on their handset to send a group text, and club administrators did state that it was an attribute they would look for when purchasing a new handset. However, not all handsets offer distribution lists as part of their operating systems. Consumer choice will certainly steer club members away from these.

Writings on the use of internet communications to connect communities of place agree that the success of ICTs in maintaining strong social networks is partly due to the fact that individuals can contribute to the community by their on-line activity (Farnham et al., 2004; Norris, 2004; Weare et al., 2005; Wellman et al. 2003) This is the same pattern that is evolving with social networking software and other web 2.0 platforms – participants contribute content to the fora, which strengthens their links to the network and adds to the synergy of the network as a whole. The networked model does not apply to using broadcast SMS in the sports clubs. The direction of communication is simplex - administrators alone send the messages, and the member recipients are inactive (unless to report a problem, and then they interact only with the administrator). Even though every member could send texts to all the others, none choose to do so, making this a centralised, top-down pattern of communication.

Despite not following the flatter, multi-stranded network model, members have reported that they believe the broadcast SMS do strengthen their group. This could be so if we consider that the texts are simply a mechanism for information sharing or coordination which, when effective, brings people together to develop the deeper exchanges which will bind them. In their examination of the potential of ICTs to build social capital, Pigg and Crank distinguish between the use of technologies to deliver *communication* and *information*, the former being expressive and the latter instrumental (Pigg & Crank, 2004). Within the clubs, the initial delivery of instrumental information by broadcast SMS is leading to face-to-face meetings which then build on communication and enhance the richer and deeper personal links which build a basis for the trust and reciprocity of social capital.

Conclusion

The mobile phone is becoming normalised in Irish society, and its use is widespread in the sports clubs included in this study. The club administrators who use broadcast SMS have a very practical attitude to its role in their lives, and yet their ways of using the device have had an important impact on the overall bonding of members to their sports club. Receiving group texts has not only saved members time and travel, but it has also strengthened ties and reinforced feelings of inclusion. This feature may need delicate handling, as over time, building the SMS into the routine of club matters will create expectations of the level of information available throughout the group, and perhaps an increased dependency on being reminded of events and kept up-to-date with club affairs. On the other hand, if overused, it may make recipients ignore the messages sent. The patterns of communications created here are contrary to the networked pattern and content subscription model evoked by most recent technologies. However, since the sender is doing a voluntary job, and one which may be taken on by any of the recipients in the future, the hierarchical direction of communication is not seen negatively. It is viewed more as providing an aide-mémoire than an order.

The club administrators who send the SMS are by no means lead users; they are simply exploiting a cheap aid to do their voluntary work. And although SMS are not normally considered a work tool, using a distribution list as a simple database in this way markedly eases the burden of communication in the club. In effect, it keeps everyone 'inside the circle'.

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9

There's an Off-line Community on the Line!

Pat Byrne

Much of the current research on the role of technology and community is focused on online communities—people who are linked through computer networks in order to pursue common goals, including those of entertainment and friendship. This chapter, however, considers the term "community," in its traditional sense, as persons who live and cooperate in a local area with shared goals and interests. Using a study of two sports clubs in the West of Ireland, I here look at the way in which electronically mediated communication (EMC) can be used to maintain the links between club members as individuals and, within them, as a group. In particular, the use of the mobile phone to send short message service (SMS) text messages helps to organize activities in a way that draws members closer, strengthening the effectiveness of the group as a whole and promoting social capital.

Off-Line Community

For many years, our primary experience of community members was those with whom we shared the local area where we lived. These were the people with whom we came together to work and play, to argue our rights, and to exploit our joint natural resources. Based on face-to-face relationships, and with shared life experiences, communities helped to form our identity. Now, however, increased mobility and developments in EMCs have opened up new opportunities for us to bond with people from both different and distant places. We are no longer bound by locale, but have become a "networked society" with personal selections defining the ties that we make:

> Because connections are to people and not to places, the technology affords shifting of work and community ties from linking people-in-places to linking people at any place . . . .This shift facilitates personal communities . . . that

> supply the essentials of community separately to each individual: support, sociability, information, social identities and a sense of belonging. (Miyata et al., 2005: 431)

Such individually defined networks are looser and less permanent. We can join and leave at will, depending on our interests and life stages. For local community groups, this ensuing transience of membership brings changes and challenges, transforming their nature, size, and persistence:

> Large groups with local chapters, long histories, multiple objectives and diverse constituencies are being replaced by more evanescent, single-purpose organisations, smaller groups that reflect the fluidity of our lives by allowing us to bond easily but to break our attachments with equivalent ease. (Putnam, 2000: 184)

These off-line communities not only struggle to retain the stability and cohesiveness they previously enjoyed, but are also at risk of losing some of the strength of their local social capital.

The concept of social capital has been defined and used in the fields of economics and sociology for some time (Bourdieu and Wacquant, 1992; Coleman, 1990; Hall, 1999; Portes, 1998), but has recently had a revival of attention with the widely publicized work of Robert Putnam (2000). In his book, *Bowling Alone: The Collapse and Revival of American Community*, Putnam documents the decline of civic participation in the United States in the latter half of the twentieth century, and with this the loss of social capital, which he defines as the "connections among individuals—social networks and the norms of reciprocity and trustworthiness that arise from them" (Putnam, 2000: 19). There have been various interpretations of the meaning of social capital, but from a meta-analysis of the literature, Pigg and Crank (2004) have identified five key elements commonly found in its definition: networks, resources for action, reciprocity transactions, bounded solidarity, and enforceable trust. Social capital is generally acknowledged to be a property of a group, although created

and maintained through the action of individuals. It has two complementary sources: *civic engagement*, the degree to which we become involved in community affairs, and *social contact*, how we as individuals work our engagement with others through interpersonal communication patterns, including visits, encounters, phone calls, and social events (Quan-Haase and Wellman, 2004). As such, social capital might be thought of as a synergy created by the trust, reciprocity, and exchange mechanisms inherent in a given social network of which individual members benefit. There are also two recognized forms of social capital based on its effects. *Bonding* social capital ties a group together and *bridging* social capital allows for interaction between groups. The sense of comfort created in an environment of high social capital is seen as a positive contributor to the quality of life.

Social capital thrives within off-line communities that meet regularly, and EMCs can support its creation and continuation. There have been a number of published works that examine this, and two recent major European projects: *ICTs and Social Capital in the Knowledge Society* (Van Bavel et al., 2004) and *Social Capital, Quality of Life and Information Society Technologies* (SOCQUIT, 2006). These mainly focus on how the Internet enables community groups to gather and organize their activities, but a few studies have also examined the role of the mobile phone in enhancing social capital (e.g., Goodman, 2003; Ling et al., 2003; Sinha, 2005).

In his book *The Mobile Connection*, Rich Ling identifies the mobile phone as a tool that allows us to maintain our social networks in the same way as the fixed-line phone; empirical evidence shows that it is widely used to coordinate social activities (Ling, 2004). The mobile phone has the added advantages over its fixed-line counterpart in that it is direct (the caller need not be in a specific location) and individualized (calling a mobile phone targets a person, not a place). Ling also identifies the bonding aspect of mobile phone use in that the ubiquity and spontaneity provided by being in contact via mobile phone “serves to weld the

social group together" (Ling, 2004: 184). Where the telephone is limited as a medium is in the types of social networks that it can maintain. As Putnam quotes from earlier writings on telephone use, "The telephone is used to maintain personal relationships now severed by space. One does not meet new friends on the telephone" (Putnam, 2000: 168). In other words, the telephone can act as a bonding, but not a bridging, tool for social engagement, complementing the ways we contact those whom we already know.

Using the Mobile Phone in a Local Community

The study described here is part of a wider piece of research that seeks to examine how local community groups might use EMCs, specifically the mobile phone, to enable changes in their patterns of communication. Unlike work that puts the technology center stage, and (perhaps unintentionally) adopts an implicitly deterministic perspective, this study focuses on the community itself, examining how the technology has become integrated into its social fabric and contributes to the strength and cohesiveness of the group as a whole.

The local communities selected for study are two sports clubs in the West of Ireland. One of these is a rural club focused on hurling, a traditional Irish field game; the other is a women's Gaelic football club based in an urban area. Hurling and football comprise the main sports administered by the Gaelic Athletic Association (GAA), the largest sporting body in Ireland, and members are drawn from all sections of the population and from all age groups.[1] Both games are played on a nonprofessional basis, and although the association has a sophisticated and well-structured administrative body in its Dublin headquarters, local clubs have autonomy over their activities and all work is voluntary.

As sporting clubs, both groups are dependent on face-to-face interaction for their very existence. They were set up before either computers or mobile phones were widespread and even before the fixed-line telephone became ubiquitous. Both the clubs in question are well-established, and attract members and supporters from the local area. In the rural club,

members have particularly strong bonds—they often have gone to school together, live close by, have family ties, and share a social circle. In essence, this is a traditional off-line community forming "a relatively stable unit with many short and overlapping communication lines and joint activities" (Van Dijk, 2006: 166), whose members meet regularly, at least weekly during the playing season. Although much of their focus is on the games played, each club also provides an active social life for members. Taking an existing, well-networked community as a starting point enables us to examine the integration of EMCs into individual communication patterns and how technology might contribute to the functioning of group interactions. It also enables us to make a link with local social capital. While it has been suggested that sports are not wholly responsible for sustaining communities or reinforcing social capital, "sports projects and the place of sport within both imagined and active senses of communities can make a valuable contribution" (Jarvie, 2006: 336).

The study includes twenty-two in-depth interviews, fifty-five questionnaires, and extensive observation of mobile phone use within the clubs, carried out during the summer of 2006. At this time, the penetration of mobile phones in the Irish population stood at 106 percent (Commission for Communications Regulation, 2006), and all of those contacted owned a mobile phone. In fact, no one could name a club member who did not carry their own phone. The interviews were carried out in person with club players, administrators, and supporters, ten females and twelve males, ranging from eighteen to fifty-five years of age. Questions asked included details on their own appropriation of the phone, including costs and payment methods. They were asked about what communication methods they used to keep in touch with friends, family, and club members, and how they might have made these same links prior to owning a mobile phone. Questions also probed the role of the mobile phone in supporting their own lifestyle, and their perception of changes, if any, in club communication patterns since mobile phones have become widespread. The questionnaires, completed by

those attending local games, were used to examine use within the wider club community. Questions covered phone appropriation, the frequency of using SMS and voice calls, and the caller's relationship with the person called. Most of the respondents were club supporters rather than active players and administrators, and their answers reflected a more passive contribution to intra-club communication.

One-to-One Communications in the Community: Voice Calls and SMS

The study found that both mobile voice calls and SMS text messaging are widely used in both clubs. During the playing season, meetings for training or matches may mean club members meet in person several times per week; in this case, mobile phone use is limited to refining or clarifying arrangements rather than chatting or gossiping. Members who are not able to meet regularly use their mobile phone to keep up with the news of the club. For those who work or live away from their home base (particularly students who are away at college yet retain their club ties), the regular use of texts ensures they keep current with gossip and news. Text messaging very much dominates communication lines throughout both clubs. Over 70 percent of the questionnaire respondents admitted to making use of text messaging several times per day, and the remainder sent a text at least weekly.

For many players in particular, their fellow club members form the immediate circle within which they socialize. Interviewees report using the mobile phone as a key tool to organize their social lives: arranging meetings, rescheduling when delayed, or texting to see if their friends were in the vicinity on a night out. This type of use is well recognized in research, and Ling has termed it the "micro-coordination" of life (Ling, 2004). Club members and players often text to gather a social group, as described by Danny, a player in the hurling club:

> Pat: And most of your text use?
>
> Danny: To see who's going for a pint. [*laughs*]
>
> Pat: And before you got the mobile, how would you have made those contacts?

> Danny: Ah, by chance meeting them. I wouldn't ring somebody's house now to see were they thinking about going out.
>
> Pat: Okay. But you would ring their mobile?
>
> Danny: Yeah.
>
> Pat: So then, do you reckon you have more contacts with people?
>
> Danny: With the mobile, yes. Easier contact. Even out of areas, text message, to where anybody is, where they are in town.
>
> Pat: So in ways it has made your social life more active?
>
> Danny: It has, more contact, yeah. (Male player)

Several interviewees report using text messages in this way, as texting enables a direct line to the recipient. Calling a fixed-line phone (which they often referred to as the "home phone") would possibly entail engaging in conversation with a third party, or having to leave a message that they could not ensure might be delivered, and would perhaps not reach the called person at all. By texting, they do not interfere in any way with family life.

Text messages in this type of scenario create a link that would otherwise not have formed at all. This forms a distinction in the role that mobile calls and texts have taken in the overall communication repertoire of club members. Respondents report that, to some extent, their mobile voice calls replace fixed-line calls, but text messages provide an additional line of communication. When these extra links end in a face-to-face meeting, it serves to tighten the circle of friends. One person acknowledged the effect of this:

> It's very handy then when you can just text all your friends and meet up, like.
> And I suppose the relationship is stronger, the more we see of each other.
> (Male player).

No matter what the message content, any communications between meetings keeps a complex network in place.

Some members also report that sending texts on their mobile phones has not just brought existing friends closer, but also widened their set of friendships overall. One

interviewee describes getting the mobile phone number of players on opposing teams, which has widened his circle of friends:

> It broadened [my circle of friends] more . . .. Just, say I'd meet them once, and just take their number, and I can text them there an odd time, that's how we get on, then . . .. Even people I met and play matches with, and talked to . . . and [I] text them later on, and meet them again. (Male player)

This pattern of behavior arose quite a few times in interviews. Swapping mobile numbers is something that is done very casually within the wider GAA community, for example, with anyone who strikes up a conversation or shares interest in the games. Getting a mobile number from someone also confers permission to contact them, even for a small query:

> You can . . . it is very socially acceptable to text them. And it doesn't mean that you are friendly, or anything, it's just handy to ask them a question or something. (Male player)

This expands the closed organic community into the outside world—embracing a larger definition of the word. The list of numbers held on one's phone (referred to as the "phone book") forms a gateway to a double layer of friends, regular close contacts and also more distant acquaintances:

> There is a closed group. There is also an expanded group as well, [a] more outside group, from the point of view of just meeting friends, like . . . [for] my twenty-first [birthday party], I just invited people on my phone. I just went down through all my contacts . . . and they came. So my phone dictates my contacts. (Male player)

In both of these interviews, there is recognition of an inner and an outer circle of friends, where the club, the local community, is part of the inner circle. These are the contacts with whom they meet and interact regularly, while the outer circle are more peripheral to their lives and easier to lose touch with. However, interviewees explained how they use text messages to keep this outer circle alive. This could be prompted by casually browsing

through the phone book and seeing the name of someone they haven't spoken to for a while, which then results in sending a text just to "check in" and catch up with any news. It could also be a deliberate action: two interviewees who had studied in Dublin and had a set of friends there now use text messages to keep those contacts active.

The club players in particular are a very close group and often engage in the common Irish activity of "slagging" or teasing their teammates. Several players described using text messages to "slag off" others about their performance: "Why did you miss that goal?" (male player). This is an activity that seems particularly suited to text messages rather than voice, possibly because a text message is less loaded in its connotations and is less likely to embarrass the recipient. For senders, it also had the advantage of not having to experience a face-to-face retaliation while giving them the enjoyment of wondering about the other's reaction:

> I suppose there are some people you get more fun out of texting than ringing . . . slagging and teasing and—just messing. (Female player)

Slagging on a voice call could easily be misinterpreted, as the secondary signals that make this form of humor acceptable (such as smiles and nudges) are absent. There is also the danger that misinterpretation could cause insecurity in the recipient. This is still the case when sending a text although the inclusion of a simple emoticon—such as a "smiley face" ;)—will display the spirit in which the message is sent.

The one interaction that is generally not deemed suitable for a voice call (but which could be done by text) is a postmortem of the team's performance. This is either the subject of a short text to express an immediate reaction or else a social meeting for a more extended face-to-face analysis. The initial text is usually an expression of euphoria or disappointment:

> I'd have one or two buddies, I suppose, that I would text. You might say, "I'm pissed off after that game" or "That was rubbish" or "That was brilliant." If

> it's basic frustration or over-joyment [*sic*], or whatever, it could be text.
>
> (Female player)

Practically everyone agrees that a more detailed post-match analysis is definitely something for face-to-face meetings, usually in the local pub. The idea of using an expensive voice call for such extended discussions or reminiscing is dismissed out of hand.

Over all, the use of text from a mobile phone in all these scenarios helps to create group bonds and keep the group active. As an extra communication line, texting tightens the links to existing ties by providing an easy way to gather and organize. The phone book acts as a repository for contact numbers, which widens one's circle and provides a ready means to maintain even loose ties.

Group Communications in the Community: Broadcast SMS

Text messages are important for maintaining social interaction in the clubs and have become a key tool in the successful administration of each club, which is done on a voluntary basis. Every GAA club has a formal committee responsible for the day-to-day running of the club and its premises (clubroom, social center, and pitches). They also have a number of team managers and trainers, each responsible for one of the several teams for different age groups and levels that may comprise the club. All of these personnel need to communicate directly and quickly with a defined set of members and use their own mobile phones to do so, using broadcast SMS (or "group text").

Sending an SMS message to a group of people at once can be done either through web-to-phone access or using the "distribution list" function found within the software of (some) handsets. All of the Irish mobile phone service providers offer a limited number of free texts—up to three hundred—per month through their Web sites, in a single transaction, to all members of a prespecified group. This works much like setting up an e-mail list. For instance, the manager of the under-18 hurling team may have the mobile numbers of all of the team set up as a list, and he or she then creates a text message to inform them of a change

in the venue of an upcoming match. The manager sends it once, and all on that list receive the message. This type of communication would originally have been done by the regular postal service or by face-to-face contacts—calling at houses, passing messages through others, or having an announcement made in the local church. In more recent years, use of the fixed-line telephone may have reduced the amount of work engendered, but burdened the sender with many calls to ensure everyone was informed. The use of group text messages renders the job simply and swiftly.

Using group texts offers a direct and speedy method of distributing information, particularly valuable for last-minute changes. It is much more convenient than using the fixed-line phone, and the managers, trainers, and committee members are all very enthusiastic about its affordance. Talking about her use of the technology, one manager says thus:

> I do that a few times a week. I find it very, very good. To do it by landline, you'd have to hang up the phone, and lift it again, and dial every number, [and] engage in conversation, and sometimes the person wouldn't be there, and you'd have to go back and try that number again later. At least with a text message it's gone. And whether they read it there and then, or read it the next day, it will deliver eventually. It is fantastic. (Female manager)

The club members who receive the text are passive in this transaction—they reply only if they can't make the session. They too are very positive about its use and appreciate the timeliness and speed of the information they receive. In particular, getting immediate updates on a change of venue or cancellation of a match due to weather conditions often eliminates unnecessary travel, an important factor especially for rural dwellers. Everyone is aware that the texts that they receive are sent to the group, and it makes them feel included: as one put it, "[it] makes you feel inside the circle" (male player). This is particularly important for younger or newer members.

In the GAA clubs, administrators are regular club members who volunteer their time to the club, taking on their post usually for one year. When doing this voluntary work, they do not use a club-provided handset, in effect also volunteering the use of their own mobile phone and personally picking up any costs that might accrue. In the interviews, no one mentioned the added cost of keeping in touch with club members, probably because broadcast SMS is currently offered as a cheap feature (multiple sends for a single price or with free access through the Internet). Another important factor for the club is that since administrative jobs are greatly eased by text use, they are then more attractive to any potential incumbent. When a new member takes on an administrative post, the previous member can easily forward any numbers they need.

Although the use of broadcast SMS in the club has been positive in keeping the group together, there is a possibility that its overuse (or misuse) could have an adverse effect. The text messages usually come from one person, and are often directive in content, which could lead them to being considered as a form of control. It is a thin line between getting a simple reminder that helps to organize one's busy life and a feeling of being inundated with instructions on how to act. The texts could at some future time be viewed by club members as an "electronic leash" similar to the use of mobile phones by parents to keep tabs on their offspring (Ling and Yttri, 2006). Just as children "kick back" to subvert this, the members might ignore or resend the text messages. To minimize this possibility, it may be necessary to limit the number of texts and to ensure that their tone is encouraging rather than dictatorial. Just one interviewee mentioned dissatisfaction with the nature of the messages she received:

> I would say that group texts are very impersonal. Say, for example, I get a text: "We definitely have training this evening at 7 o'clock." People might ignore it, and say, "That's a group text." Whereas if it was sent directly, "Hi Sandra, make sure you train this evening," you'd probably pay more heed to it. (Female player)

Although her point is valid, the suggested alternative solution of a tailored message negates the reduction in administrative burden engendered by sending a generic group message.

The group text message defines a closed loop for communication and, in doing so, excludes as well as includes members. This is currently not a problem in the clubs, as the creation of a text group is a very casual thing, and anyone who might need to know the information distributed can easily ask to join. Since the objective of the text is to bring people in, not to form an elitist group, widening the circle is not a problem. Having a restricted group might be seen as discriminatory, but there would be little advantage to having texts on, for instance, the timing of a meeting sent to everyone. Another source of potential problems would be if a text was written to inspire players but in a tone that provoked aggression toward the opposing team. While friendly rivalry is encouraged, the GAA as an association discourages any expression of aggression both on and off the pitch. Such text messages are not part of the ethos of the sport.

Although none of these points were raised in interview, they are all potential (negative) scenarios that could emerge from the use of group texts as practiced in the clubs. It might be seen that a delicate balance in the number and tone of texts sent needs to be maintained in order to keep their effect positive for all concerned.

Communicating Community with SMS

Both clubs have been in existence before the widespread use of mobile phones and have always needed to have extensive contact with their members to organize activities and inform about fixtures and results. Face-to-face meetings are, and will remain, the key way in which the clubs communicate and maintain their solidity. Now, text messaging has become an important medium for them for communication both between individual members and within the group as a whole. They are using the mobile phone as a mediator in maintaining and promoting the links that bind them together.

Individual club members have woven use of the mobile phone into their own personal social lives, which of course includes their sports activities. They report that text messages form an extra link in their communications repertoire and are often used between face-to-face meetings for reminders and keeping in contact. The more the group members interact with each other, the closer they become, tightening their social circle. Individual members are also aware of the benefits of receiving group texts. They get updates in club news directly and accurately, irrespective of their personal circumstances or location. They know that the message content often will save them time and travel.

It is not just the texts sent, but also the software features of the handset that help to keep links alive. When a text message is a reminder for an upcoming meeting or training, a bonus is that the receiver can keep the information stored on their mobile. The fact that text messages are stored until the receiver elects to delete them means that the handset can be used to retain details of upcoming meetings, and the message itself can act as a diary entry. Ling describes this use of the mobile as a "repository of personal history" (Ling, 2008), and it is a practice that is becoming more frequent: for example, airlines text flight reference numbers to travelers, replacing the need for paper records. Of course, the main use of the handset software is the phone book feature to record personal contacts. This enables the handset's owner to call on any part of that social network, literally at the push of a button, and also enables him/her to collect and store new contacts easily. This eases maintenance of relationships both close and distant, and using text messages is a cheap and fast way to keep these connections active. Interestingly, for such functions, it is the mobile phone's use as a piece of electronic technology (its data storage capacity), rather than its use as a communication tool, that delivers these benefits to the holder.

For the club as a community, use of the group text feature has many obvious advantages. There is a guarantee that the message is delivered directly to the targeted person,

with no need for an intermediary or the small talk that is part of the social protocol of a voice call. This also saves time for the sender and ensures message consistency compared to making multiple voice calls or separate texts. This means less panic over last-minute changes, as they are more easily able to respond to changes in match arrangements. This builds flexibility into club affairs. Also the ease of workload afforded by the mobile phone to the voluntary job of club administrator cannot be overlooked. Such jobs as managing a team or serving on a club committee can put serious demands on personal time, and any tool that eases the responsibility is positive for an administrator. Making administrative jobs simpler for, and thus more attractive to, volunteers is beneficial to the club as a whole, as a turnover in personnel helps to maintain enthusiasm and gives voice to representative contribution:

> Community itself must mean more than just a common bond between individuals or a sense of belonging and obligation to others . . . [it must] mean in part democratic community in which members of the community or the club have a real say over decisions affecting them. (Jarvie, 2006: 331)

A regular turnover of those carrying out the club administration enables a wider group of people to share in the direction of their joint activities.

Using group texts also provides some indirect benefits to the club, mainly in bonding the group together. Getting a message from the club regularly reminds each member of their part within the community as a whole. The feelings of inclusion created here have been noted in other studies, such as that of Farnham and Keyani (2006), who implemented a group text message system among a number of socially active friends. In their analysis, members reported a strong sense of connection to the group, even for those who did not themselves ever broadcast messages. In a study of the impact of computer networking on community, Kavanaugh (1999) surveyed parents who were sent information through e-mail—the equivalent of a group text—by a school board. In this case, 91 percent of respondents reported that having news communicated to them through the list had made them feel more

involved in school issues. Being included in an information ring serves to automatically bind members to a group.

The promotion of equality is another unexpected side effect of the group texts. The fact that everyone is getting the same message at the same time is important to recipients, as it reassures them they are all on same footing. If such messages were to be delivered by a method that did not ensure simultaneous receipt, being forgotten from a list, or receiving a message after hearing it from someone else, could create the feeling of being marginalized. The chairman of one of the clubs acknowledged this:

> People feel left out if they aren't informed of something. Whereas if quite a few people are informed, and you are the one who is not, you'd wonder why. You know, in other years, before mobiles, that was never a problem. (Male chairman)

The last piece of this comment also brings up another point. Before group texts were available, members accepted that messages could be delivered late or that they could be missed out in a complex relay system. Once this equity of information has been established in the club, ceasing it would have a negative effect.

There is no doubt that use of the mobile phone has a bonding effect within both clubs, drawing members together and keeping the ties between them active. Using the five elements of social capital defined earlier—networks, resources for action, reciprocity transactions, bounded solidarity, and enforceable trust (Pigg and Crank, 2004)—it can be seen that social capital is also fed through text interactions. The text messages themselves comprise a network of links that define the extent of the community as a group. The use of broadcast SMS to encourage members in their participation and contribution to club affairs acts as a resource for action. Enforceable trust within the group is fed by the shared understanding of expected behavior emanating from the text messages—attendance and contribution to

community as a whole. Reciprocity transactions are most likely to occur among those who regularly keep in touch with each other.

Conclusion

The "off-line" communities in this study have integrated mobile phone use into their communication patterns in innovative ways in order to help run, and successfully operate, their sports clubs. Regular meetings are the cornerstones of local community interaction, but the mediated links afforded by the mobile phone can help to keep it active when members go their separate ways:

> Mediated interaction can enhance the broader co-present forms of interaction and can also function in its own right as a means through which members of a group can engage one another and develop a common sense of identity. Indeed . . . the directness and ubiquity of the channel can lead to a tightening of the social bonds within a group. (Ling, 2008: 119)

The role of EMCs in contributing to active citizenship is paradoxical—it sometimes intervenes to distract us from our interaction with others, and yet it also facilitates it. As members of a sports club, these individuals contribute to the civic engagement portion of what defines social capital. When using their mobile phones, they contribute to the social action portion.

Old-style "place and purpose," off-line community is alive not only in sports clubs in Ireland but also in neighborhood groups in Chicago, the community gardens in Havana and the barrios of Barcelona. In all of these cases, "real" community is practiced face-to-face, but technology can have a supportive role in keeping communications alive and facilitating the logistics of organizing the group. With just a little user innovation and careful use, the mobile phone can ensure it is part of this equation.

Note

1. Members of the GAA are from all segments of the population. Forty percent of members come from either the skilled or semiskilled manual working class and 33 percent come from the higher or lower professional class. There is a wide spread of ages, with 43 percent being over forty and 28 percent under twenty-five (Delaney and Fahey, 2005).

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